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AIR CONDITIONING & REFRIGERATION News

THE NEWSPAPER OF THE INDUSTRY

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INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By GEORGE F. TAUBENECK

Stories of the Week
Gags of the Week
Acrobatic Feat
Out of Our Mailbag
Use Your Head
Too Many Don't Read

Stories of the Week

Dancing school petered out, as usual. Joey bicycled home fast like a streak.

"Have a good time, son?" chippered his mama.

"Not bad. There were so many empty girls I didn't have to help out like last time."

Nowadays men don't marry women on $25 a week like they used to do. A girl must be earning at least twice that much before a young man will look at her.

At a decent interval following the funeral Jonathan visited his friend's widow.

"Your late husband and I were great pals," he mourned. "I wonder if there's something of his around here you'd let me have—to remember him by?"

Shyly but coyly, the widow offered:

"How about me?"

Gags of the Week

The trouble with being best man at a wedding is that you get no chance to prove it.

Old bankers don't die. They just lose interest.

A friendly girl can win a husband by exhibiting a generous nature—or by exhibiting how generous nature has been with her.

Acrobatic Feat

"He pulled the belt round, and his head was bent as he slipped it through the buckle."—*This Brittle Glory*, by STELLA MORTON.

Out of Our Mailbag

Los Angeles, Calif.

Editor:

I don't know under what category we can refer to the Dior styling controversy. Perhaps it falls into the home conditioning department.

Having existed through the robust hobble skirt decade I know that, to most males, the new styles are bound to fall flat.

A spokeswoman for Christian Dior defends the new styles as an approach to reality. To this we Californians will lend our support—with the reservation that the approach must not be left entirely in the hands of experts.

HUNTINGTON SMALL

The Creamery Package Mfg. Co.
Chicago, Ill.

Editor:

Yeah! We read your Inside Dope each week and wonder sometimes where you collect all your nonsense. In spite of all the new gadgets and progress that you inform us about in your weekly publication, we note, however, that they're still wearing the same things in women's brassieres.

We're having quite a time in our town about these Jay Walkers, so much so it came up in the City Council the other day. One of our Alderman got up and made quite an oration on this subject and when he finished another one got up and yelled, That's what I've been

(Concluded on Page 9, Col. 1)

Ridgewood ... Off Wa... Illegal C...

RIDGEWOOD, N. J.—... what happened recently, sales of water-saving devices for air conditioning equipment should boom in Ridgewood.

Water Department inspectors sealed off about half the commercial air conditioners they checked during the first day of their inspection tour to enforce a new village ordinance.

The ordinance prohibits use of the potable water supply for air conditioning units of 3 tons' capacity or more unless the units are equipped with water conservers.

Merchants who failed to comply with the ordinance either by having recirculating devices installed or private wells dug looked on as their units were sealed off from the municipal water supply.

"Most of them said that they just hadn't gotten around to converting or that they couldn't get

(Concluded on Back Page, Col. 5)

Carrier Sales and Profits Rise

SYRACUSE, N. Y. — Carrier Corp. recently reported a net profit of $7,094,770 for the 12 months ended July 31, 1954. In the preceding similar period the corporation earned $5,895,454.

Completed sales of the corporation totaled $161,100,186 and new orders were booked in the amount of $150,177,658. The comparable figures for the 12 months ended July 31, 1953 were $153,782,463 and $171,518,550, respectively.

On July 31, 1954 the backlog of unfilled orders amounted to $38,327,763 as compared with $49,250,291 a year earlier.

With respect to fiscal 1954 as a

(Concluded on Back Page, Col. 1)

Columbia Meeting Celebrates Growth Of Cooling Field

NEW YORK CITY — Twenty-four talks by authorities dealing with practically every phase of the industry have been programmed for the two-day conference on refrigeration and air conditioning to be held at Columbia university here Monday and Tuesday, Sept. 13 and 14.

"Panorama of Progress" is the theme of the conference, which is being held to celebrate six anniversaries: the 10th of The Refrigeration Research Foundation; the 20th of the American Society of

(Concluded on Back Page, Col. 2)

Norge Boosts List Price Of Top Refrigerator $40

CHICAGO—Norge Div. of Borg-Warner Corp. has increased the list price of its top-of-the-line model 1180 refrigerator from $389.95 to $429.95, a boost of $40, it was reported recently.

No change was made in the wholesale price of the refrigerator to allow a bigger dealer markup, according to a Norge official.

...3 Air Conditioning, Refrigeration Dealer Sales Up, Says Census

WASHINGTON, D. C.—Sales of merchants primarily engaged in selling air conditioning and commercial refrigeration equipment in the United States during 1953 were 150% greater than in 1948, the U. S. Bureau of the Census reported recently.

Robert W. Burgess, director of the bureau, in a preliminary report, added that their 1953 sales were 8.5% higher than in 1952.

Sales for 1953 are compared with 1948 because that is the year the latest complete census of business was made prior to 1953.

The bureau reported that 1953 sales volume of these merchants was $755 million as compared with $310 million in 1948. There were 1,409 establishments in 1948 primarily engaged in selling air conditioning and commercial refrig-

(Concluded on Page 29, Col. 1)

A-P Buys Stock of Milwaukee Valve Co.

MILWAUKEE—R. W. Johnson, president of A-P Controls Corp., announced recently that all outstanding stock of the Milwaukee Valve Co. has been purchased by A-P Controls Corp.

A-P Controls, a Wisconsin corporation, has two plants in Milwaukee, with its main office at 2450 North 32nd St. It manufactures oil, refrigeration, air conditioning, and gas valves.

The Milwaukee Valve Co. with

(Concluded on Back Page, Col. 1)

RCA Names Rising A. C. General Mgr.

NEW YORK CITY — Appointment of Austin Rising as general manager of the RCA air conditioning department was announced recently by Robert A. Seidel, executive vice president of consumer products for Radio Corp. of America.

Rising was formerly vice president and sales manager of the O.

(Concluded on Page 4, Col. 2)

July Room Cooler Sales Top First 6 Mos. In Omaha Area

OMAHA, Neb.—More room air conditioners were sold during July in the area served by the Omaha Public Power District than in all the first six months of the year, figures furnished by the utility showed recently.

Dealers in the territory sold 2,012 units in July and 3,976 in the first seven months of the year.

Other appliance sales for July and the first seven months were as follows:

Appliance	July	First 7 Mos.
Refrigerators	848	3,687
Freezers	160	986
Ranges	253	1,845
Water Heaters	45	454
Conventional Washers	342	2,120
Automatic Washers	355	2,314
Dryers	149	1,069
Dehumidifiers	25	106

O. A. Sutton Plans To Make Larger Air Conditioners

WICHITA, Kan.—O. A. Sutton Corp. here, manufacturer of room air conditioners and fans, is reported as preparing to enter the 1955 market with central-type package year-round air conditioning equipment for both the residential and commercial markets.

The company is said to be planning to market a line of air conditioning units under its "Vornado" trade name in the range of 2 tons to 10 tons capacity, available with heating equipment in the same general range of applications.

Initial production at the Sutton plant will be on 2-ton and 3-ton models, it is said, with other manufacturers producing the larger models. However, it is reported that Sutton eventually plans to produce the entire line at its own plant.

FTC Dairy Hearings In Capital; Three Appeals Are Rejected

CLEVELAND — The Federal Trade Commission hearing on complaints of unfair trade practices against the Borden Co. has been transferred from New York City to the FTC building in Washington, D. C., Ray Kromer, executive vice president of the Refrigeration & Air Conditioning Contractors Association, announced recently.

The FTC has also declined to entertain appeals from a hearing examiner's order rejecting proposed settlements of three other cases in which ice cream manufacturers are charged with unfair methods of competition.

The appeals had been filed by the Carnation Co. of Los Angeles, Arden Farms Co. of Los Angeles, and Foremost Dairies, Inc. of Jacksonville, Fla.

Kromer said that FTC Trial

(Concluded on Page 29, Col. 5)

Floor Stock Tax Refund Ruling Issued by IRS

WASHINGTON, D. C.—A ruling dealing with appliances subject to the 5% manufacturers' excise tax and made under the Excise Tax Reduction Act of 1954 was announced recently by the Internal Revenue Service.

The agency ruled that anyone who, on April 1, held floor stocks of taxable appliances to be furnished in exchange for coupons or stamps issued in conjunction with the sale of other merchandise was

(Concluded on Page 4, Col. 2)

Low Bidder Loses Out

ST. LOUIS—Because the board of police commissioners felt that the lowest bidder had limited experience in air conditioning work, would not guarantee a completion date, and did not have a service department, it awarded a contract to air condition police headquarters here to the second lowest bidder.

Gilmore & Co. won the contract at $95,975.

Refrigeration Is Major Concern Following Storm

Gets First Priority In Emergency Setup; Freezer Owners Get Assistance

BOSTON—With electric power knocked out over a wide area of New England, the problem of refrigeration in homes, stores, and warehouses was one of the most serious left by the devastating Hurricane Carol.

But government officials and businessmen acted swiftly in efforts to prevent spoilage of food.

Calling food preservation in powerless areas the first practical problem, Massachusetts' governor, Christian A. Harter, proclaimed a state of emergency and seized all available supplies of dry ice.

Distribution of the supplies was handled by the State Department of Public Health. Stores and warehouses with large amounts of

(Concluded on Page 4, Col. 3)

Amana's Offer To Users

AMANA, Iowa—Amana Refrigeration, Inc. has offered to repair any of its freezers damaged by the Hurricane Carol and to reimburse Amana freezer owners for food spoiled by the storm.

George C. Foerstner, executive vice president of Amana, wired the firm's distributors in New England to advise dealers and consumers that, as its contribution to the relief of suffering and financial loss occasioned by the storm, Amana "will clean, repair, and place in good operating condition any new, used, or in-use Amana freezer which was damaged by the recent storm and thus rendered inoperative. We will do this without cost to you, your dealers, or your customers.

"Furthermore, we will reimburse any user of an Amana freezer installed in the home for loss due to food spoilage resulting from the storm. This offer is made notwithstanding the fact that this goes well beyond the coverage afforded by our food spoilage warranty."

New Type Service Clinic Scheduled in Michigan

KALAMAZOO, Mich.—First of six service clinics planned by the Michigan Association of the Refrigeration Service Engineers Society will be held at the Harris hotel here Sept. 18.

Three meetings will be held simultaneously, beginning at 12:30 p.m.

A representative of White-Rodgers Electric Co. will discuss electrical problems; carbonators will be discussed by a Temprite Products Corp. representative, and automobile air conditioning by Wabash Mfg. Co.

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Clerks' Union Charges 3 With Violation of Sunday Closing Rule In Toledo

TOLEDO — Affidavits charging three area appliance dealers with violation of a 19th Century Ohio law against Sunday work have been filed by the AFL Retail Clerks' union with Maumee and Washington Township justices of the peace, according to William F. Sturm, secretary-treasurer of the clerks' union.

Frank Rogers, president of Frank Rogers Furniture City, Inc., Maumee, one of the three stores cited, appeared before John C. Budd, Maumee justice of the peace, and pleaded not guilty. He was released on $50 bond to appear Sept. 15 for a hearing.

Sturm said affidavits also were filed with June Ridenour, Washington Township justice of the peace, charging Toledo Bargain Barn and Imperial Wayside Furniture Co. with violating the old law by being open for business on Sunday.

Sturm contends that Sunday store openings constitute unfair competition to workers he represents at various Toledo stores.

The affidavits he has filed are the result of a check made of area stores last Sunday by representatives of the clerks' union, he indicated.

New Jersey Contractors Affiliate with RACCA

CLEVELAND — Affiliation of the New Jersey State Refrigeration & Contractors Association with the national Refrigeration & Air Conditioning Contractors Association was announced here recently by Ray Kromer, RACCA executive vice president.

The New Jersey group voted in favor of affiliation on Aug. 3, Kromer said. He added that S. Fillipone appointed members of the group to serve on a local joint committee with members of the local United Association. This committee will coordinate the activities, plans, and programs formulated by the national joint committee of RACCA and UA, Kromer declared.

Coolerator Regional Office In Merchandise Mart Closed

CHICAGO—Coolerator Co. has closed its regional office on the 11th floor of the Merchandise Mart but will retain the space for use during the winter and summer homefurnishings markets and for distributor meetings, according to Frank Wheeler, regional manager.

Wheeler termed the action an economy move prompted by the general competitive situation. He will work out of his home in Elmhurst, Ill.

Merchandising Meetings Being Held by Airtemp

DAYTON—Plans to hold 12 regional merchandising meetings, Sept. 8-20, were announced by Airtemp Div. of Chrysler Corp.

"These field meetings to be attended by all members of our national sales staff," stated E. A. Nash, Airtemp merchandising manager, "will be the occasion for the announcement of our advertising and promotion programs for the forthcoming '55 season.

"For 1955 the merchandising activities of Chrysler Airtemp are being greatly expanded and intensified," Nash added.

"As announced recently, one new step will be the individual promotion of our three main lines —room air conditioners, commercial air conditioners, and residential year-round air conditioners. The stature sales-wise that these products have achieved necessitates special attention.

"Basically, our new over-all program has been designed to give maximum assistance to the retail dealer, to stimulate his interest in and improve his local merchandising efforts."

Meetings were scheduled as follows: Sept. 8—Chicago, Atlanta; Sept. 10—Detroit, Miami; Sept. 13—New York, New Orleans; Sept. 15—Philadelphia, Dallas; Sept. 17—Washington, Kansas City; Sept. 20—Dayton, St. Louis.

Boggs Adds 275,000 Cu.Ft. To Low Temperature Storage

BIRMINGHAM, Ala. — Boggs Brokerage Co., of which R. A. Boggs is president, will add a total of 275,000 cu. ft. of additional sub-zero temperature storage space to the present facilities of the plant at 936 Twentieth St., N.

Boggs said the space will be provided by a new building which has more loading platforms, rail facilities, and offices for shippers' representatives.

"The new building will contain all sub-zero temperature rooms," Boggs continued. "The facilities will be on one floor and have a raised platform system.

"The entire area can store the equivalent of 200 refrigerated carloads of products."

I-H Refrigeration Sales for 9 Months Top '53 Period

CHICAGO — International Harvester Co. reported recently that sales of its refrigeration products and parts for the nine months ended July 31 rose to $38,583,000 from $37,299,000 for the like year-ago period.

However, total company sales in the same period declined, amounting to $762,577,000 compared with $999,764,000 in the comparable period last year. Net income was $28,699,000, against $38,517,000 for the 1953 period.

I-H said the drop in sales was due to declining farm income, droughts in some areas, uncertainty about future farm policies of the government, and a general slackening in business.

The Big Push

TALLAHASSEE, Fla.—Heavier use of power for air conditioners was the main reason for a record use of electricity from the municipally-owned power distribution system here during July, City Clerk George White reported recently.

Utility Official Explains Need for Surcharge on 'Water-Wasting' Coolers

ST. LOUIS—According to President Victor Weir, higher water rates for all its users may eventually result if St. Louis County Water Co. is not allowed the surcharge it has requested for water-wasting air conditioning units.

Weir appeared before County Council to explain his recent petition to the Missouri Public Service Commission. In that petition he asked for a surcharge rate of $40 per ton of air conditioning capacity for air conditioners that use water but are of the non-conserved type.

The surcharge would either result in such customers paying their way more equitably, or in forcing them to install conservation equipment such as cooling towers, atmospheric condensers, or spray ponds for reclaiming the water, Weir said.

Weir estimated — correcting a figure he had previously given the commission—that there are now 10,000 tons of units in the county wasting water. If the trend toward air conditioning continues, the number of units by next year will be doubled, he said.

"And that would require around 12,000,000 additional gallons of water on a hot day," Weir asserted. "My firm would soon be forced to build additional facilities, just for the benefit of air conditioning water wasters. And that would force us to ask an over-all rate increase."

The County Council gave no opinion on the matter.

Trion Appoints Murdock Commercial Sales Mgr.

McKEES ROCKS, Pa.—William R. Murdock has been appointed commercial sales manager of Trion, Inc., manufacturer of electronic air cleaning equipment.

Expect the Exceptional

✓ IN DESIGN EFFICIENCY
✓ IN LASTING DURABILITY
✓ IN LONG-TERM ECONOMY
✓ IN QUIET OPERATION
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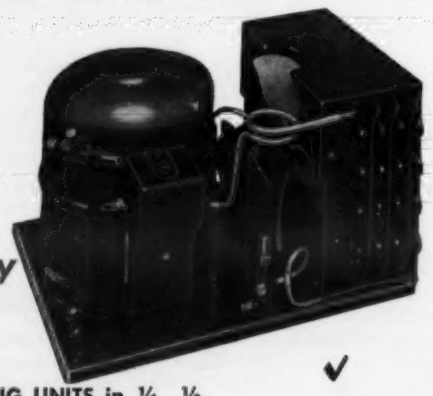
Servel SUPERMETICS

Exceptionally Rugged

SUPERMETIC ELECTRIC POWER UNITS in sizes from ¼ HP through 7½ HP, to match a broad range of requirements.



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SUPERMETIC CAPILLARY TUBE ELECTRIC CONDENSING UNITS in ¼, ⅓, and ½ HP sizes for manufacturers of small refrigeration fixtures.

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SUPERMETIC HERMETICALLY SEALED AIR-COOLED AND WATER-COOLED ELECTRIC CONDENSING UNITS in sizes from ¼ HP through 1 HP.

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Servel
THE NAME TO WATCH FOR GREAT ADVANCES IN REFRIGERATION AND AIR CONDITIONING

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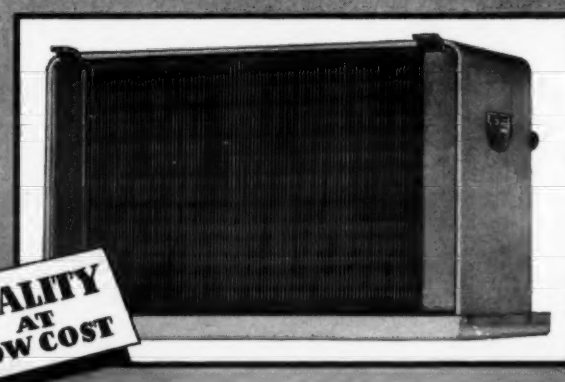

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UNIT COOLER

MODEL NO.	BTU'S @ 1° T.D.	C.F.M.	COIL SURFACE	LIST PRICE
260-UC	260	485	82.34 Sq. Ft.	$147.00
347-UC	347	680	109.39 Sq. Ft.	182.00
433-UC	433	760	121.49 Sq. Ft.	198.00
540-UC	540	995	154.13 Sq. Ft.	241.00
688-UC	688	1260	204.19 Sq. Ft.	307.00
867-UC	867	1670	256.50 Sq. Ft.	348.00
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BIG 13.59 CUBIC FOOT SIZE!

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as low as 37¢ A DAY

After Small Down Payment places this beautiful freezer in your customer's home

IT'S BIG! 13.59 CU. FT.!

Here is a real family freezer big enough to take care of the food requirements of any customer.

IT'S FEATURE PACKED TOO!

This sensational Deepfreeze Freezer has every woman-wanted feature you've ever dreamed of!

ORDER NOW!

You have more to tell . . . more to sell with this deal than any you have ever had. It's packed with power, prestige, price, and promotion!

Check this list of features found in Model B-146

- Finger-touch latch with lock!
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- One-piece wrap-around cabinet!
- Toe space
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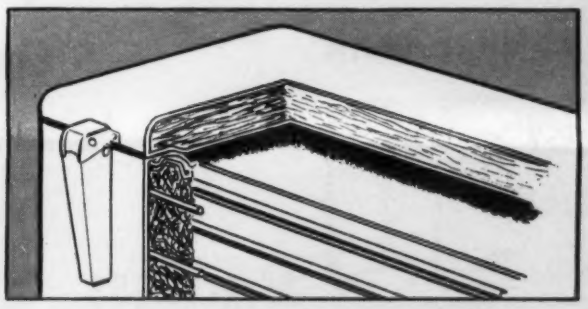
- Separate fast-freeze compartment
- Radiant condenser

LOWEST PRICE PER CU. FT. EVER!



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Floating Action Lid

A touch of a fingertip and lid virtually floats open . . . stays open to leave both hands free for storing or removing foods. Special lock guards against "raiders"!

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PROMOTION HELP!

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Makers of genuine Deepfreeze Home Freezers, Refrigerators, Electric Ranges, Room Air Conditioners and Water Heaters. Also sold by authorized dealers in Canada.

MAIL COUPON TODAY!

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Gentlemen:

I'm interested in this power-packed proposition for profits. Please rush me details.

*Dealer Name*_____

*Street Address*_____

*City*_____ *State*_____

XUM

Scott Handles Kelvinator, Leonard In Scranton Area

DETROIT—Appointment of the Charles B. Scott Co., Scranton, Pa., as distributor of Kelvinator and Leonard appliances in 11 counties of northeastern Pennsylvania was announced recently by H. A. Valencourt, Kelvinator manager of wholesale distribution.

Effective date of the franchise agreement is Sept. 15.

Valencourt said, "In order to insure continuation of the type of outstanding service Raymond Rosen & Co. has provided Kelvinator and Leonard dealers over a long period of years, it was decided by mutual agreement between Kelvinator and the Rosen Co. to franchise a strong independent distributor in the 11 northeastern coal-field counties of Pennsylvania."

Valencourt also said "the territory is being relinquished by the Philadelphia distributor as a means of concentrating its activities and increasing operating efficiency. The Rosen organization will continue to distribute Kelvinator and Leonard products in southeastern Pennsylvania, Delaware, and southern New Jersey.

"The Scott Co. has operated in the territory since 1878, and in addition to appliances handles mine and mill equipment, plumbing and heating, automotive supplies, housewares, paint, and hardware."

RCA Names Rising--

(Concluded from Page 1, Col. 3)

A. Sutton Corp. His position with RCA is a newly-created one.

Seidel was also recently elevated to his present position to succeed Joseph B. Elliott, who resigned to accept the presidency of Shick, Inc. He was previously vice president of sales and service subsidiaries.

Seidel joined RCA in 1949 as vice president in charge of distribution of the RCA Victor Div. In his more recent position, he was responsible for the activities of RCA Institutes, Inc., RCA Service Co., Inc., and RCA Victor Distributing Corp.

Floor Stock Refund--

(Concluded from Page 1, Col. 4)

eligible for floor stocks refund or credit.

Such persons qualified as dealers under Section 3416 of the Internal Revenue Code, as added by Section 305 of the new statute, according to IRS.

However, the agency added, anyone who, on April 1, held floor stocks of appliances to be furnished as prizes in connection with a lottery or contest does not qualify as a dealer and such appliances are not subject to floor stocks refund or credit, unless there is a showing that the person otherwise qualifies as a dealer holding such articles for sale.

Storm Damage--

(Concluded from Page 1, Col. 5)

frozen food on hand got first priority. The refrigerant was also made available for home freezers, with owners being given from 15 to 50 lbs. depending on the size of the freezer and the amount of food in it.

To protect warehouses with big stocks of meat, fish, and other perishables, the Air Force set up a dry ice airlift from Newark to Boston. Two planes carried 10 tons of the ice purchased by the state from Pure Carbonic Co. of Newark.

Milk companies promised ice for stores without refrigeration, according to Malcolm McCabe, executive director of the Massachusetts Retail Grocers Association.

One local dealer came to the rescue of some 18 steady customers whose freezers were out of operation. He stored their food in the several freezers he had in stock.

Also "saving the day" for freezer owners was Wholesale Food Plan, which operates freezer-food plans in three New York department stores. The day following the hurricane, the concern distributed 25-lb. blocks of dry ice to 150 Long Island freezer owners who were without electric power. More were aided later.

The firm also offered to store food in its own freezers if consumers in storm-hit areas would bring their packages to the Ozone Park, N. Y. plant.

Former Used Car Dealers Sue Auto Makers for Right To Buy New Cars

NEW HAVEN, Conn. — Charging that the automobile dealer franchise system is a violation of anti-trust laws, two former used car dealers have filed suit in U. S. District Court here to force automobile manufacturers to sell them new cars "freely, directly, and without discrimination."

The two dealers, Erwin Hathaway and James Walsh of Waterbury, Conn., assert that they have been forced out of business—they sold new cars without benefit of franchise—because neither auto manufacturers nor regularly franchised dealers would sell them current model cars. The continued refusal of manufacturers and dealers to sell them new cars is preventing them from re-entering the business, they declared.

The pair have named in their suit General Motors Corp., Ford Motor Co., Chrysler Corp., Plymouth Motor Corp., Dodge Brothers Corp., General Motors Acceptance Corp., nine local franchised dealers, and the National Automobile Dealers Association. The trade paper *Automotive News* has been named a co-conspirator.

They say the defendants and other franchised dealers "have attempted to monopolize and are monopolizing the manufacture, distribution, and sale of automobiles, and automobile parts, the financing of automobile sales, and the servicing of automobiles."

They add that "defendants are still violating the anti-trust laws . . . and are thus preventing the plaintiffs from re-entering the automobile business. To terminate such violations and protect their businesses, the plaintiffs are seeking injunctive relief.

Plaintiffs are also seeking $1,232,970 in triple damages under the Sherman and Clayton anti-trust acts.

The two dealers say they have filed the suit not only in their own name but also for all other dealers similarly situated.

The co-conspirator charge against *Automotive News* was for publishing allegedly "misleading material, much of it directly or indirectly furnished by the defendants to discredit and force out of business independent car dealers."

Hathaway claimed that he was doing an annual volume of $250,000 in new car sales before he was forced out of business. Walsh, it was said, had not really gotten started selling new cars.

Jet Refrigeration Files Name

BUFFALO — A business name has been filed in the Erie County clerk's office for Jet Refrigeration, 39 Kosciuszko St., Buffalo, by Walter Gorzynski.

W. E. SAYLOR

W. L. JEFFREY

H. L. TRAVIS

H. A. VALENCOURT

KELVINATOR DIV., American Motors Corp. last week announced the realignment of responsibility for four of its top executives. New positions of the men as reported in the Sept. 6 issue of the NEWS are: W. E. Saylor, manager of advertising and sales promotion; Walter L. Jeffrey, manager of sales planning; H. L. Travis retains his former title of manager of retail distribution, but will assume added responsibilities; and H. A. Valencourt continues as manager of wholesale distribution with a wider range of activity.

Southern RSES Meets Sept. 24-26 In Mobile

MOBILE, Ala.—Fall educational meeting of the Southern Region RSES will be held in the Admiral Semmes hotel here on Sept. 24-26, Larry Arbuckle, coordinator, announced recently.

Registration starts on the evening of Friday, Sept. 24. An educational program is planned for Saturday and a business meeting Sunday. A banquet, entertainment, and dance are scheduled for Saturday evening.

The Saturday educational session, open to all who wish to attend, will begin at 9 a.m. Lectures have been arranged on new equipment, Arbuckle said.

Room reservations should be made directly with the hotel, he added.

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Another ROCHESTER PRODUCTS ACHIEVEMENT

Records show that in 1953 Rochester Products built and sold enough completely formed GM Steel Tubing Condenser Coils to equip *MORE THAN HALF* of all the household refrigerators that were sold in the U.S.A. during that year. Here is evidence that GM steel Tubing is helping more and more refrigeration manufacturers to build *better products, faster, for less money.* Why not let us do the same for *you!*

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ROCHESTER PRODUCTS DIVISION OF GENERAL MOTORS
ROCHESTER, N. Y., U. S. A.
ALSO MANUFACTURERS OF ROCHESTER CARBURETORS AND ROCHESTER CIGAR LIGHTERS

Pocket cooler profits with INTERNATIONAL AIR CONDITIONER COVERS

MADE OF Firestone Velon

2,000,000 air conditioners already sold . . . 1,500,000 predicted for this year! Here's your chance for cool, EXTRA profits. Sell the first and finest . . . sell INTERNATIONAL Air Conditioner Covers, made of heavier gauge, trouble-free Firestone Velon. Get the jump on the market . . . let us show you how with our handsome cooperative advertising plan . . . get the facts today.

Retails from $6.45 to $8.45.

27 styles to fit every leading make from 1/3 to 1 ton, 1951 to 1954 models.

INTERNATIONAL COVERS, INC.
39 GREAT JONES STREET, NEW YORK 12, N. Y.

Booklet Tells Who Will Be Admitted To Dairy Exposition

WASHINGTON, D. C. — With the 19th Dairy Industries Exposition looming in the industry's calendar for the week of Oct. 25 in Atlantic City, N. J., Dairy Industries Supply Association, through its Exposition Credentials Committee, has prepared a small booklet which clearly indicates who may—and under what circumstances—attend the Exposition.

The primary point stressed by the booklet is that dairy processors—and certain others closely linked to the dairy processing field—are admitted promptly and without fee upon simple registration identification. So are members of their families.

Membership in any industrial association or trade or professional or scientific body is at no time a requisite for show admission nor does lack of such membership bring about a charging of an admission fee, the booklet brings out.

General public is not admitted.

The booklet goes into fine detail in everyday language as to who may be admitted, admission charges and upon whom made, and liabilities incurrable by those who disregard admissions rules. A free copy is available upon request from DISA, 1108 16th St., N.W., Washington, D. C.

NCRSA Survey Finds Dealer Sales, Profits Up

PHILADELPHIA—Members reporting sales for the first six months and for the second quarter of 1954 have enjoyed a substantial increase over the same periods in 1953, Marie Lawton, executive secretary of the National Commercial Refrigerator Sales Association, announced recently.

For those participating, she said, total dollar sales for the first six months of 1954 were up 16.17% over the same period in 1953. For the second quarter they showed an increase of 18.69% over last year.

Dollar net profit before taxes for the first six months was up 7.92%. Inventory as of June 30 was 7.48% higher than last year, while accounts receivable on that date were 11.72% greater than on the same date last year.

Floyd Duvall Dies of Heart Attack at 54

INDIANAPOLIS—Floyd Duvall, manager of the Ansul Chemical Co.'s Indianapolis refrigeration sales office, died unexpectedly on Sept. 6, at Knoxville, Tenn. Death came as the result of a heart attack. He was 54 years old.

Duvall had been with Ansul since 1942, in the company's Philadelphia and Chicago sales offices. As Indianapolis district manager he was responsible for a territory comprising seven midwestern states.

Duvall was a veteran refrigeration man. Prior to joining Ansul he had been employed by the Mills Novelty Co. and the Zerozone Corp.

He was a member of ASRE and RSES. He is survived by his wife.

The Old, Old Story

CHICAGO — "Heat and serve" frozen specialties are rapidly approaching 50% of the market volume in many areas, but their expansion is being handicapped by the lack of sufficient low temperature display cases in retail stores.

This information was given to the National Food Distributors' Association here recently by Harry L. Carpel, a Washington, D. C. frozen food wholesaler and a director of N.F.D.A.

Kaiser Joins ASHVE as Director of Research

NEW YORK CITY — Appointment of Elmer R. Kaiser, Columbus, Ohio, as the new director of research for the American Society of Heating & Ventilating Engineers has been announced by Louis N. Hunter, president, at Society headquarters here.

Kaiser was appointed to the post by the ASHVE Council and was to have assumed his new duties at the Society Research Laboratory, 7218 Euclid Ave., Cleveland, Ohio, about Sept. 1.

Since his graduation from the University of Wisconsin with a B.S. and M.S. in mechanical engineering in 1934, he has been actively engaged in research work, particularly in the field of fuels, according to the announcement.

During the past 20 years he served on the staff of Battelle Memorial Institute, and with Bituminous Coal Research as assistant to the president, assistant director of Research, general manager of B.C.R. Products, Inc., and associate director of research in charge of the B.C.R. Laboratory at Columbus.

Rates Cut on Water for Cooling In 9 Ark. Cities

LITTLE ROCK, Ark.—An order signed recently by the Arkansas Public Service Commission gives owners of large air conditioning units in nine cities a rate reduction on water used in the equipment.

The reduction was offered voluntarily by General Waterworks Corp. of Pine Bluff. Retroactive to Aug. 1, it will apply in Pine Bluff, Batesville, Russellville, Rison, Morrilton, Hamburg, Fordyce, England, and Brinkley on 3 to 5-ton conditioners not equipped with water savers.

'Copleweld' Compressors Now Can Use 'Freon-22'

SIDNEY, Ohio—Copeland Refrigeration Corp. announces its Copleweld hermetic motor-compressors are now available for use with "Freon-22."

There are four models, from ½ hp. through 1 hp.

All welded motor-compressor models are now available for both "F-12" and "F-22," at the customer's option.

Sutton Promotes Renfro, Kaths, Brient to New Posts

WICHITA, Kan.—Following the recent resignation of Austin Rising as vice president and sales manager of the A. O. Sutton Corp. here, Earl H. Renfro was named assistant general sales manager to a vice president and general sales manager who will be named at a later date.

Renfro was formerly assistant sales manager.

The company also announced that Fred Kaths, formerly advertising manager, has been appointed sales manager in charge of the consumer appliance division and Wes Brient has been named sales manager for the firm's commercial products.

Noon Whistle Welcomed

AKRON, Ohio—Air conditioning will insure year-round comfort for employes in the newly modernized cafeteria at the main plant of the B. F. Goodrich Co. here. The modernized cafeteria occupies 12,000 sq. ft. of floor space and the program cost $120,000. The new facilities permit the serving of 1,000 lunches daily.

Reichenbach Now Heads Frick St. Louis Branch

WAYNESBORO, Pa.—Frick Co. has announced the appointment of Hugo Reichenbach as manager of its branch office in St. Louis.

Reichenbach was graduated in mechanical engineering from Washington university in 1931. After taking the Frick Refrigeration Training Course, he served in the engineering and estimating departments of the company before doing sales work at the Dallas branch.

He entered the Army in June of 1942, being discharged as a captain on Jan. 1, 1946, when he returned to the Dallas branch.

For the past five years he has been on the engineering staff of H. K. Ferguson Co., of Cleveland, with broad duties. He has traveled widely both in this country and in Europe.

To Cool Three Floors In Georgia Bank Bldg.

SAVANNAH, Ga.—The Georgia State Bank building here will be completely remodeled and the top three floors will be air conditioned. Work on the project is expected to be completed by Oct. 1.

S120
S115
S220
S225
R350
ALCO
SOLENOID
VALVES
M340
M344
the complete line
• for Freon-12, Freon-22, Methyl Chloride and Ammonia
• for liquid line, suction line or hot gas discharge service
• for brine, water, steam, air, oil
• for all types of electric current
• for wide range of connections: ½" to 2⅝" solder, ⅜" to 2" pipe thread
• for use with thermostats, float switches, timers, and many other control devices
Special valves for special applications are available.
M620
M630
R1 ODF
R1 FPT
R2, R6 FPT
R2, R6 ODF
M31F
M5
M6
Our Bulletins 173 and 182 give complete technical information. Send for your free copies today.
SEE YOUR ALCO WHOLESALER
ALCO VALVE CO.
853 KINGSLAND AVE. • ST. LOUIS 5, MO.
5686

Fall Show-House Ad Will Feature Amana Freezer

AMANA, Iowa—The Amana upright freezer will be featured in the fall Show-House advertisement, scheduled to appear in the *Saturday Evening Post* and *Living For Young Homemakers,* according to Amana Refrigeration, Inc.

The cooperative ad, one of a series by Show-House integrating household products of several manufacturers, will carry a "Let's Do It Ourselves" theme and will appear in the Oct. 2 edition of the *Saturday Evening Post* and the November edition of *Living For Young Homemakers.*

Two views, open and closed, of the 19-cu. ft. Amana Stor-Mor freezer will be included in the ad. In keeping with the over-all theme, copy will highlight the time and work-saving features of the Amana, plus the added convenience value of the Stor-Mor door.

A booklet on "The Story of Freezing" will be offered by Amana through the coupon listing in the ad.

Coordinated through Show-House, the cooperative ad series includes a floor plan and interior and exterior views of the seven-room, modern one-story home.

Here Are the Facts, Ma'am, From EEI on Food Freezing

NEW YORK CITY — "Food Freezing Facts," a new consumer booklet telling "how-to" prepare and use frozen foods, is now available from Edison Electric Institute.

Compiled by EEI's Home Service Committee, the 32-page booklet is designed to meet electric utility companies' need for a simple answer book on home freezing.

Besides general instructions on preparing both cooked and uncooked foods for storage, "Food Freezing Facts" includes handy tips on freezing and on planning menus with frozen foods. The booklet is done in two colors with attractive drawings.

Steps for preparing and freezing fruits, vegetables, and meats are explained in detail in "Food Freezing Facts." Other topics include the handling of cooked foods, eggs, and sandwiches.

The freezer care section of the booklet gives hints on defrosting and storage methods, while the meal planning section highlights eight complete frozen food menus.

NEW PRODUCTS?
Turn to "What's New" Page for useful information on new products.
Use Key No. for fastest service.

* WALL WIRE PRODUCTS COMPANY *
A FOREMOST NAME IN THE MANUFACTURE OF DIVERSIFIED WIRE PRODUCTS OF SUPERIOR QUALITY
*
ORIGINATORS OF WIRE & TUBE CONDENSERS FOR STATIC AND FORCED CONVECTION, AND OF WIRE & TUBE FREEZER SHELVES
*
STAINLESS STEEL SHELVES, SHELVES WITH CHROME PLATE, ZINC PLATE, PRO SEAL AND PORCELIZED FINISH
*
WIRE GRILLES · GUARDS
MATERIAL HANDLING BASKETS
MISCELLANEOUS FORMED AND WELDED WIRE ASSEMBLIES
ARC WELDED ASSEMBLIES.
WALL WIRE PRODUCTS CO.
PLYMOUTH, MICHIGAN
* *

Deepfreeze 'Fall Freezer Campaign' Featuring Low Prices on 2 Models

N. CHICAGO, Ill. — Two Deepfreeze home freezer models that set the sales pace for the line in a successful promotion this summer will carry special prices as leaders of a "fall freezer campaign," running Sept. 6 to Oct. 30.

The featured freezers are the 13.6-cu. ft. model B-146, which is priced to retail for $299.95 during the campaign, and the 7.7-cu. ft. model B-86, to retail at a promotional figure of $199.95.

Dealers will enjoy full profit margins on units bought during the campaign and sold at the special list prices, said J. A. Rishel, general sales manager of Deepfreeze Appliance Div., Motor Products Corp.

The larger freezer can be advertised in the United States to sell for "as low as 37 cents a day after a small down payment." Both of the chest-style models have such features as floating-action lid, finger-touch latch with lock, one-piece cabinet, adjustable temperature control, anti-condensation radiant condenser, and interior light.

Promotional aids, including special advertising mats, will be available to dealers taking part in the campaign. Gabriel Heatter, news commentator, promoted the fall freezer drive on 540 Mutual network stations Sept. 9.

Deepfreeze also is conducting a five-week drive, ending Sept. 25, to multiply retail outlets for its refrigerator line. During this period, Deepfreeze refrigerators will be available at prices permitting greater than normal markups for dealers.

Shirley-Onstad Appointed Distributor for Amana

AMANA, Iowa—Shirley-Onstad, Inc., Fargo, N. D., has been named distributor for Amana freezers and room air conditioners, according to E. L. Hinchliff, sales manager for Amana Refrigeration, Inc.

The company will represent Amana in the firm's north central territory, including 14 counties in northwest Minnesota and all of North Dakota with the exception of two counties.

Officers of Shirley-Onstad include Donald E. Shirley, president; P. J. Onstad, vice president and sales manager; Norman Shirley, secretary-treasurer; S. E. Nordquist, general manager; E. R. Murphy, procurement officer; and Roy Kissinger, service.

U. S. Buys 645 Freezers From Revco During 1954

DEERFIELD, Mich.—Revco, Inc. tops the food freezer industry in supplying food freezers to Uncle Sam, claims Wade Willey, works manager of the Michigan firm.

To date this year, Revco has furnished 645 8-cu. ft. freezers to the government. Many of the units are slated for overseas bases of the armed forces, Willey noted.

IDEAL Speed-Freeze PRODUCTS
BEVERAGE COOLERS AND INSTANTANEOUS DRAFT BEER COOLERS.
(With Refrigerated Faucets)
WRITE
IDEAL COOLER CORPORATION
2953 EASTON AVE · ST. LOUIS 6, MO

John Wanamaker Newspaper Ad Offers Choice of Four Freezer-Food Plans

NEW YORK CITY—John Wanamaker's, local department store, recently used a large newspaper advertisement to announce its own freezer-food plan which it said will "save you money on every meal."

The ad offered customers a choice of four plans as follows:

"Plan No. 1 for a family of 2 or 3. You buy a four-month supply of food and a 12-cu. ft. freezer for as little as $12.94 per week.

"Plan No. 2 for a family of 3 or 4. You buy a four-month supply of food and a 15-cu. ft. freezer for as little as $15.74 per week.

"Plan No. 3 for a family of 4 or 5. You buy a four-month supply of food and a 17-cu. ft. freezer for as little as $21.35 per week.

"Plan No. 4 for a family of 5 or 6. You buy a four-month supply of food and a 22-cu. ft. freezer for as little as $26.28 per week."

Each price includes U. S. Government graded prime meats, poultry, fish, vegetables, fruits, juices, and ice cream; the monthly payment on the freezer for 24 months, and a small credit service charge, following an initial 10% down payment on the freezer, according to the ad.

The new United 17-cu. ft. refrigerator-freezer combination was pictured and described in the ad, which offered "generous trade-in allowances for your old refrigerator regardless of its age!"

The ad also advised: "Wanamaker's offers every member the personal services of an expert food consultant to assist in purchasing, planning, and preparing all foods . . . all at no extra cost. In addition, every member receives free year-round food guidance, including cook books and menus."

Copy emphasized that there are no membership charges for any food plan service and that all foods are delivered to the customer's home at no extra cost.

Other copy declared that the Wanamaker plan "saves you many dollars on food each year" because of these points:

"Because you buy all your perishable foods in quantity, you get quantity discount price. Save hundreds of dollars a year.

"Nationally advertised brands. . .

"A Federal inspector is present at all times at the plant of our authorized food suppliers, Puritan Beef Co., to inspect and approve all meats before processing.

"Choose what you want . . . you buy only the foods that you and your family want."

The ad contained a coupon which readers could use to obtain a list of food prices in the plan. In addition to name, telephone number, and address, interested readers were asked to indicate whether or not they owned a freezer and the number of members in their family.

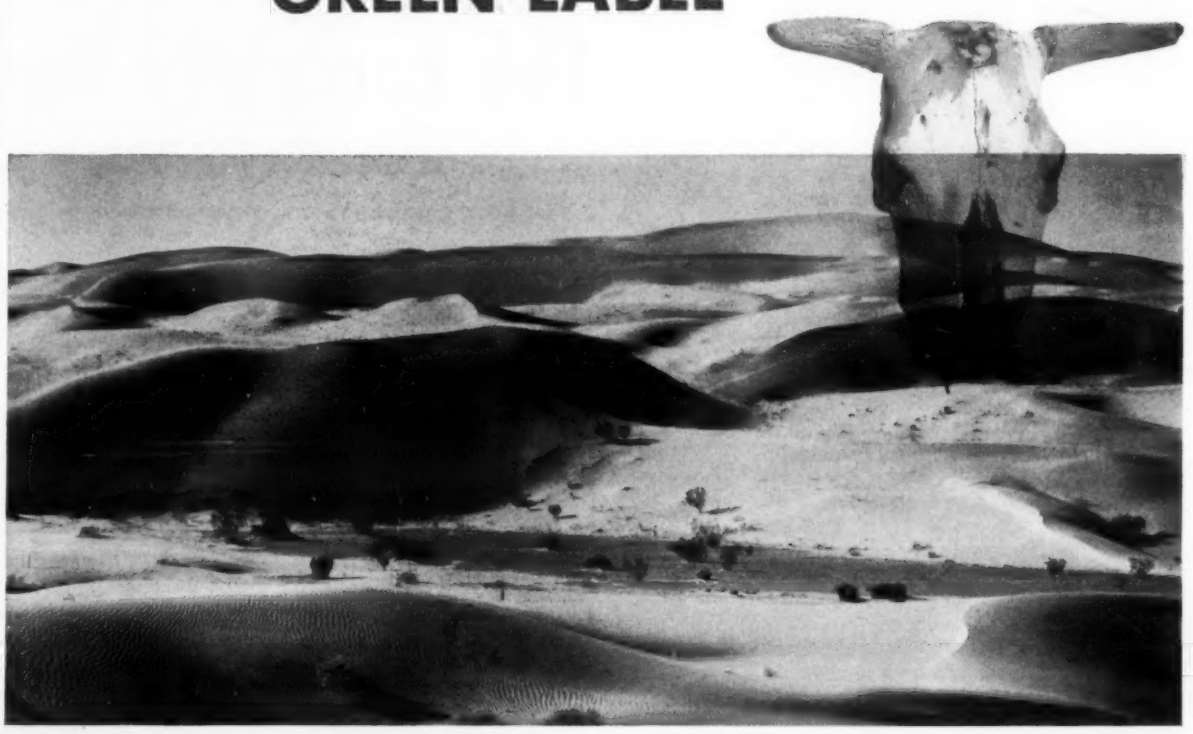
Amana Southeast Corp. Distributes In Georgia

ATLANTA — Amana Southeast Corp., 357 Foundry St., N.W., has been appointed distributor for Amana home freezers and air conditioners in Georgia.

Officers of the new corporation are Sam Barber, president; C. H. Myers, vice president; and A. L. Bloemer, secretary-treasurer.

Duncan L. Cash, sales manager, said he is developing a sales organization that will be trained to assist dealers to set up Amana food plans.

Now...Readily Available
General Chemical's
genetron® 141
GREEN LABEL



Quality Specifications

The extremely high quality standards to which General Chemical manufactures "Genetron" 141 are shown below. The purity of every pound is guaranteed to meet or even better these stringent specifications.

Moisture-wt. %, max.	0.0010
Chlorides	None
High boiling impurities-vol. %, max.	0.05
Non-condensable gases (gases insoluble in perchloroethylene)-vol. % in vapor phase, max.	5.0
Boiling pt. at 760 mm. Hg, °F.	−41.4
Boiling range °F. (to 85% pt.), max.	0.9

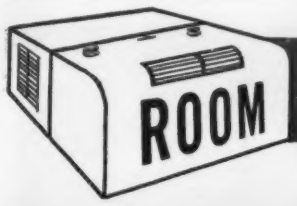
Selected Physical Data

Chemical Formula	$CHClF_2$
Molecular Weight	86.5
Boiling Pt. (°F) at 1 Atmosphere Pressure	−41.4
Evaporator Pressure at 5°F (p.s.i. absolute)	43.02
Condensing Pressure at 86°F (p.s.i. absolute)	174.5
Freezing Point (°F) at 1 Atmosphere Pressure	−256.0
Critical Temperature (°F)	204.8
Critical Pressure (p.s.i. absolute)	716
*Compressor Discharge Temperature (°F)	131
Compression Ratio (86°F/5°F)	4.06
Specific Volume of Vapor at 5°F (cu.ft./lb.)	1.246
Latent Heat of Vaporization at 5°F (B.t.u./lb.)	93.5
Net Refrigeration Effect of Liquid 86°F/5°F (B.t.u./lb.)	69.3
Specific Heat of Liquid at 86°F (B.t.u./lb.°F)	0.335
Specific Heat of Vapor at Constant Pressure of 1 atm. and 86°F (B.t.u./lb.°F)	0.15
Specific Heat Ratio at 86°F at 1 atm. (k=Cp/Cv)	1.18
*Coefficient of Performance	4.65
*Horsepower/Ton Refrigeration	1.016
*Refrigerant Circulated/Ton Refrig. (lbs./min.)	2.89
*Liquid Circulated/Ton Refrig. (cu.in./min.)	68.1
*Compressor Displacement/Ton Refrig. (c.f.m.)	3.60
Toxicity (Underwriters' Laboratories Group No.)	5A
Flammability & Explosivity	None
Odor	Ethereal
Solubility of Water in Liquid Refrigerant at 32°F (gm./100 gm. Refrigerant)	0.060
Solubility of Water in Liquid Refrigerant at 86°F (gm./100 gm. Refrigerant)	0.15
Oil Solubility (Miscibility with Lubricating Oils)	yes

*Based on 5°F Evaporator Temperature and 86°F Condenser Temperature

Principal Uses

In reciprocating compressors for—
- "Package type" air conditioning units
- Home freezers
- Low-temperature industrial process work



PRIZE WINNING WINDOW in the Mitchell Mfg. Co.'s room air conditioner national window display contest was designed and built by appliance dealer Sam Fern, Elizabeth, N. J., and Mitchell distributor-salesman H. Weller of Mytelka & Rose, Inc., Newark, N. J. An all-expense paid air trip to Mexico City and Acapulco for 12 days was awarded as grand prize to each of the two men for their outstanding window display.

Mitchell Room Air Conditioner Window Display Features Entire Family, Including the Poodle

CHICAGO—Good teamwork on the part of an Elizabeth, N. J. appliance dealer and the distributor-salesman who helped design and build his winning entry has won for them first prize in the Mitchell room air conditioner national window display contest, it was announced recently by Howard Haas, Mitchell's director of advertising and sales promotion.

An all-expense paid air trip to Mexico City and Acapulco for 12 days was awarded to dealer Sam Fern and distributor-salesman H. Weller as the grand national prize for the winning window.

Designed to create distributor-retailer incentive for building dramatic displays around Mitchell room air conditioners, the contest awarded 40 other prizes to dealers and distributors for their outstanding windows with prizes chosen from Mitchell's radio and television line.

Theme for the grand prize window was "Everybody Sleeps with Mitchell," and an eye-catching banner carrying this message was placed in the store's center window.

Dramatically portraying this theme was a scene picturing a typical American husband and wife resting comfortably in their Mitchell air conditioned bedroom.

Their small son is shown telling them that his room is too hot and explaining that he too would like to sleep in the room with the new "Mitchell."

The family's poodle also gets into the act. Lying at the foot of the bed he says, "I wish that kid would get out of here. He's spoiling my cool dreams by Mitchell."

The contest, set up to benefit both the dealer and the distributor-salesman, compensated each for his time and effort. In addition to the 42 prizes, a $5 bill was presented to the salesman for each window display entry he submitted.

Dallas Air Conditioning Firm Incorporated for $1,000

DALLAS—Texas, Inc. here has obtained a charter from the Secretary of State to deal in air conditioning equipment. Authorized capital stock is $1,000. Incorporators: Robert L. Johnson, V. L. Strangen, and Robert K. Brown.

PERSONNEL in the Treasurer's Office at the Shelby county courthouse in Memphis, Tenn., work comfortably, cooled by a battery of 10 1-hp. Remington room air conditioners. Altogether, 140 Remington units were ordered for the building, the installation included a $100,000 rewiring job to provide additional current.

County Courthouse Installs 140 Room Conditioners—Rewiring Costs $100,000

MEMPHIS—A total of 140 1-hp. window air conditioners have been installed in the old Shelby County Courthouse here this spring and summer. That's a lot of room coolers, especially for a building originally wired in 1910.

Although the electric load has doubled several times since the building's conversion from gas illumination, the present wire facelifting is the biggest increase in capacity to date.

The rewiring to take care of the air conditioning is costing more than $100,000.

Twenty-four Remington room air conditioners, supplied by Associated Southern Industries, were installed in the city treasurer's and the county offices in April. A hundred and sixteen more Remington units were ordered this summer. Mathes and Frigidaire units also are in operation in the courthouse.

To control the current in the courthouse's new electric system, two 8-ft. panel vaults have been installed. A new generator also has been placed. Tunneling was necessary before installation of equipment and the maze of wiring could be completed. Still in place, alongside the new conduits, are some of the original gas pipes.

An unusual type of installation is being used for the Remington units in the courthouse, where juries sometimes deliberate in summer heat waves. The units are mounted high above head level through holes cut in panels that cover the entire top parts of the windows.

Installation was by Bodkin and Greer Refrigeration Service, wiring by The McBride Electric Co. Both firms are in Memphis.

R. C. Black Co. Named UsAirco Representative

ROCHESTER, N. Y.—The R. C. Black Co. here has been named manufacturer's representative by the United States Air Conditioning Corp., covering the western half of New York State.

Robert C. Black is former advertising and sales promotion manager of the heating department of the Dravo Corp. in Pittsburgh, prior to which he served on the staff of the vice president at Westinghouse Electric Corp.

A mechanical-industrial engineer, Black attended the Rochester Institute of Technology and the University of Tennessee. He completed graduate training at Westinghouse.

Hotpoint Appoints Bidak Room Unit Design Engineer

CHICAGO—John Bidak has announced that he was recently appointed design engineer on room air conditioners by Hotpoint Co. here.

Before joining Hotpoint, Bidak was for five years cabinet engineer in charge of freezers and room air conditioners for Coolerator Co.

Bidak holds degrees from Indiana Tech and Chrysler Institute of Engineering. He is a member of the American Society of Refrigerating Engineers.

In his new position, Bidak said he will be responsible for the design of room air conditioner cabinets, refrigeration systems, and crating.

the "super-dry"

MONOCHLORODIFLUOROMETHANE

Reduce Corrosion Problems—Costly Breakdowns

The industry asked for it. Now, in "Genetron" 141, General Chemical provides refrigeration manufacturers, wholesalers and servicemen with really "dry" monochlorodifluoromethane. "Genetron" 141 has a guaranteed moisture content of not more than 10 parts per million . . . and it is so carefully made that it consistently runs well below!

Yes, as a result of General Chemical's manufacturing methods, "Genetron" 141 is truly "super-dry." With it, any user, anywhere, can be sure of getting this important refrigerant the way the industry wants it . . ."bone dry."

Comparison will quickly prove the merits of "Genetron" 141. That's because "Genetron" 141 was especially developed to give you all the benefits of monochlorodifluoromethane without the problems that have been encountered with higher moisture material. And—equally important—you get all the high quality and superiority of "Genetron" 141 without spending a red cent extra!

For further information on "Genetron" 141, write or wire the nearest General Chemical office listed below. Remember—in refrigerants—the name "Genetron" stands for superior, "super-dry" products—made for today and tomorrow!

Color Coded for your Convenience

To distinguish its "super-dry" product, General Chemical has given it the special numerical designation—141.

For your convenience—to speed identification and prevent mistakes in use—container heads and labels are color-coded with the familiar pale green that indicates monochlorodifluoromethane everywhere in the industry.

GENERAL CHEMICAL DIVISION
ALLIED CHEMICAL & DYE CORPORATION
40 Rector Street, New York 6, N. Y.

Offices: Albany • Atlanta • Baltimore • Birmingham • Boston • Bridgeport • Buffalo • Charlotte • Chicago Cleveland • Denver • Detroit • Greenville (Miss.) • Houston • Jacksonville • Kalamazoo • Los Angeles Minneapolis • New York • Philadelphia • Pittsburgh • Providence • San Francisco • Seattle • St. Louis Yakima (Wash.) • In Wisconsin: General Chemical Company, Inc., Milwaukee

In Canada: The Nichols Chemical Company, Limited • Montreal • Toronto • Vancouver

America's Foremost Producer of Fluorine Chemicals

NEW! in Time for BIG Wintertime Sales . . .

JIFFY AIR CONDITIONER COVERS

Made in Sizes to Fit ALL Famous Makes! Fast Turnover; Healthy Profit Item to Tap Huge New Air Conditioner Market.

CHECK JIFFY'S FEATURES:

Made of Genuine Rand-flex Vinyl Plastic

- Completely Weatherproof
  Protects Against Rain, Snow, Sleet
- Metal Reinforced Sides & Corners
- One Piece Construction
- Resists Flame, Grease, Oil Stains
- Decorator Styled
- Installed in a Jiffy

Beautifully and Individually Packaged

Sizes to Fit All Leading Brands . . .

⅓ to 1½ Ton Units • Retails for $6.95 to $7.95

Sales Territories Available - For Further Details Contact

JIFFY COVERS, Inc. CHATHAM PHENIX BUILDING Long Island City 1, N. Y. - Ravenswood 9-4800

Hot Springs Resort Hotel Offers Air Conditioning

HOT SPRINGS, Ark.—The Hotel DeSoto here, famous since 1927 for its mineral baths, claims to be the first resort hotel in Arkansas to offer its guests complete air conditioning facilities.

John G. Asimos, who bought the DeSoto (formerly the Howe) in 1946, has capped a long-range improvement program by installing two Servel DUT water chillers and 110 convectors to air condition 98 rooms plus the lobby, mezzanine, and part of the dining area. The system, engineered by Rawland Blaylock of Little Rock, includes individual controls in each room.

According to Asimos, steam-fired water chillers were chosen because operating costs would be negligible. The existing boiler and steam system employed the year around for the baths is being used to operate the DUT's.

The equipment room was provided from a waste area between the rear of the hotel and a retaining wall. Space in the equipment room has been allocated for a third water chiller with installations already made to receive the unit.

This water chiller, which like the others employs the absorption system of refrigeration, will serve the top floor of the DeSoto, converted several years ago into 20 luxury rooms and baths.

Restaurant & Bar Equipment

Scholarship Awaits Top Gas Fryer Salesman

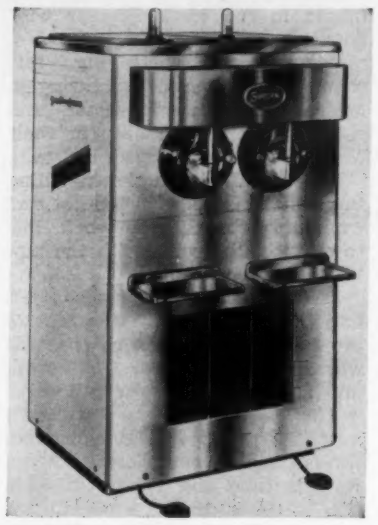
NEW YORK CITY—The restaurant supply house salesman who sells the most gas deep fat fryers during the American Gas Association P.E.P. campaign during September, October, and November will win a $250 scholarship at Michigan State college from the Frying Equipment and Supply Co., distributor for the Keating instant recovery fryer.

Another scholarship for any of the short courses offered goes to the commercial gas representative in whose territory the most gas heated deep fat fryers are sold.

The scholarships will be awarded on the basis of official results of the P.E.P. campaign.

Both scholarships are for the restaurant equipment training course sponsored by the National Association of Food Equipment Manufacturers and as part of the continuing education program of Michigan State college.

These courses have been conducted for the past two years and the faculty is composed of leaders in each field of restaurant equipment, design, and sales of equipment and supplies to restaurants.



Sweden Adds Double Head Continuous Freezer

SEATTLE—A new double head automatic continuous freezer designed to provide two flavors of soft-serve products or milk shakes, or one flavor of each, has been announced by Sweden Freezer, manufacturer of soft-serve freezers and "Frigidmixer" milk shake machines.

The new unit occupies a floor space of only 5.5 sq. ft., and is only 52 in. high.

The adaptability of the two heads permits a wide application of the new model. For small operations with limited space, the Model 1-231 can make the soft-serve product for all fountain dishes in one head and milk shakes in the other.

In larger operations, where two or more flavors of soft-serve or milk shakes are desired, two of these machines will provide up to three flavors of one and one flavor of the other, depending on the volume of fountain dishes and milk shakes sold and number of flavors desired.

Individual operation of each head is the outstanding feature of the new machine, which has been designated as Model 1-231. The two heads—each 1-gal. capacity—operate independently. Each is equipped with its own refrigerated, 4-gal., stainless steel mix tank, ¾-hp. heavy-duty dasher motor, 1-hp. hermetic compressor, and foot switch control. Each head will produce 10 gals. of soft-serve product per hour or 18 gals. of milk shakes per hour, according to the announcement.

As with the other automatic continuous models in the Sweden line, the 1-231 is operated by the dispenser's foot, the cylinder being replenished with mix through a patented mix feed valve arrangement as product is drawn. The dispenser's hands are left free to handle the dishes, thus making it possible to draw product for up to four dishes or two milk shakes at one time.

Either head of the Model 1-231 can be equipped with one of the firm's new electronic portion controls that gives the operator complete control of his ice cream costs or a heavy-duty Hamilton Beach mixer on the front panel for blending in the flavoring when making milk shakes.

Simple operational controls are contained in a compact stainless steel case under the hood away from the dispensers who need only the foot switch to operate the machine during the day.

Liquid Carbonic Bows Carbonator Self-Help Kit

CHICAGO — A new "Atomatic" carbonator "Do It Yourself" Kit, designed for cost savings and more adaptable installation, has been introduced by The Liquid Carbonic Corp.

This special kit includes everything required to self-contain the Liquid-exclusive Atomatic carbonator in soda fountains and coin or mechanically-operated beverage dispensers.

With the "Do It Yourself" Kit, the buyer gets all the Liquid Atomatic carbonator features, plus a choice of 4 or 6-in. tanks.

Shreveport Refrigeration Opens Sunset Acres Store

SHREVEPORT, La.—A branch of the Shreveport Refrigeration Co. was opened recently in the new Sunset Acres shopping center on Mansfield Rd. here. Manager of the new appliance store is Carter Stephens.

Shreveport Refrigeration Co., now principally owned by Gross Williams, Jr., is the result of a merger in 1945 of the Gross Williams Appliance Co. in Bossier City and the Shreveport Refrigeration and Appliance Co. here. Both of these stores are still operated by the firm, which is a Frigidaire dealership.

In the 60 Square D branch offices throughout the country there are Field Engineers ready to work with you on any electrical distribution or control problem. A substantial amount of their time is spent with original equipment manufacturers, air-conditioning contractors, architects and mechanical engineers—finding the one best way to handle any given job.

It costs you nothing to have your nearby Square D Field Engineer work with you. Why not get acquainted with him?

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

Model EF-20 (SCEWC)
20 gal. cap.
5 ft. long
Model EF-40 (SCEWC)
40 gal. cap.
7 ft. long
Sell ALL the features
WITH THE NEW
Everfrost
FOUNTAINETTE SERIES
The Everfrost Fountainette Series offers a fully self-contained unit, including carbonator and compressor, in a range of sizes to fit every application. Only with an Everfrost Fountainette do you get a compact, packaged, ready-to-operate fountain that requires such a small amount of floor space . . . that is so easy to install . . . that is so economical to buy and operate. Why not write today for detailed information on the Fountainette Series, as well as the complete line of Everfrost Soda Fountain and Drink Dispensing equipment.
Features mean Sales . . . these Everfrost Features will bring you extra sales, greater profit:
★ Fully self-contained
★ Three temperature controls
★ Patented Everfrost Carbonator and Water Cooler
★ Everfrost designed water pump
★ Stainless steel syrup pumps
★ Running water dipper well and refuse chute
★ All steel construction
★ Simplified plumbing
★ Stainless steel interiors
★ 100% cold wall construction
Model EF-30 (SCEWC)
30 gal. cap.
6 ft. long
EVERFROST SALES, INC.
14815 S. Broadway • Gardena, California

Hot Springs Resort Hotel Offers Air Conditioning

HOT SPRINGS, Ark.—The Hotel DeSoto here, famous since 1927 for its mineral baths, claims to be the first resort hotel in Arkansas to offer its guests complete air conditioning facilities.

John G. Asimos, who bought the DeSoto (formerly the Howe) in 1946, has capped a long-range improvement program by installing two Servel DUT water chillers and 110 convectors to air condition 98 rooms plus the lobby, mezzanine, and part of the dining area. The system, engineered by Rawland Blaylock of Little Rock, includes individual controls in each room.

According to Asimos, steam-fired water chillers were chosen because operating costs would be negligible. The existing boiler and steam system employed the year around for the baths is being used to operate the DUT's.

The equipment room was provided from a waste area between the rear of the hotel and a retaining wall. Space in the equipment room has been allocated for a third water chiller with installations already made to receive the unit.

This water chiller, which like the others employs the absorption system of refrigeration, will serve the top floor of the DeSoto, converted several years ago into 20 luxury rooms and baths.

Restaurant & Bar Equipment

Scholarship Awaits Top Gas Fryer Salesman

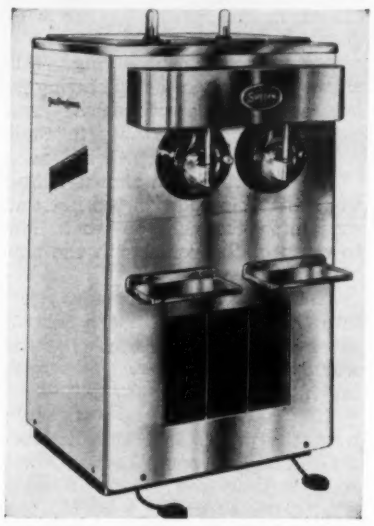
NEW YORK CITY—The restaurant supply house salesman who sells the most gas deep fat fryers during the American Gas Association P.E.P. campaign during September, October, and November will win a $250 scholarship at Michigan State college from the Frying Equipment and Supply Co., distributor for the Keating instant recovery fryer.

Another scholarship for any of the short courses offered goes to the commercial gas representative in whose territory the most gas heated deep fat fryers are sold.

The scholarships will be awarded on the basis of official results of the P.E.P. campaign.

Both scholarships are for the restaurant equipment training course sponsored by the National Association of Food Equipment Manufacturers and as part of the continuing education program of Michigan State college.

These courses have been conducted for the past two years and the faculty is composed of leaders in each field of restaurant equipment, design, and sales of equipment and supplies to restaurants.



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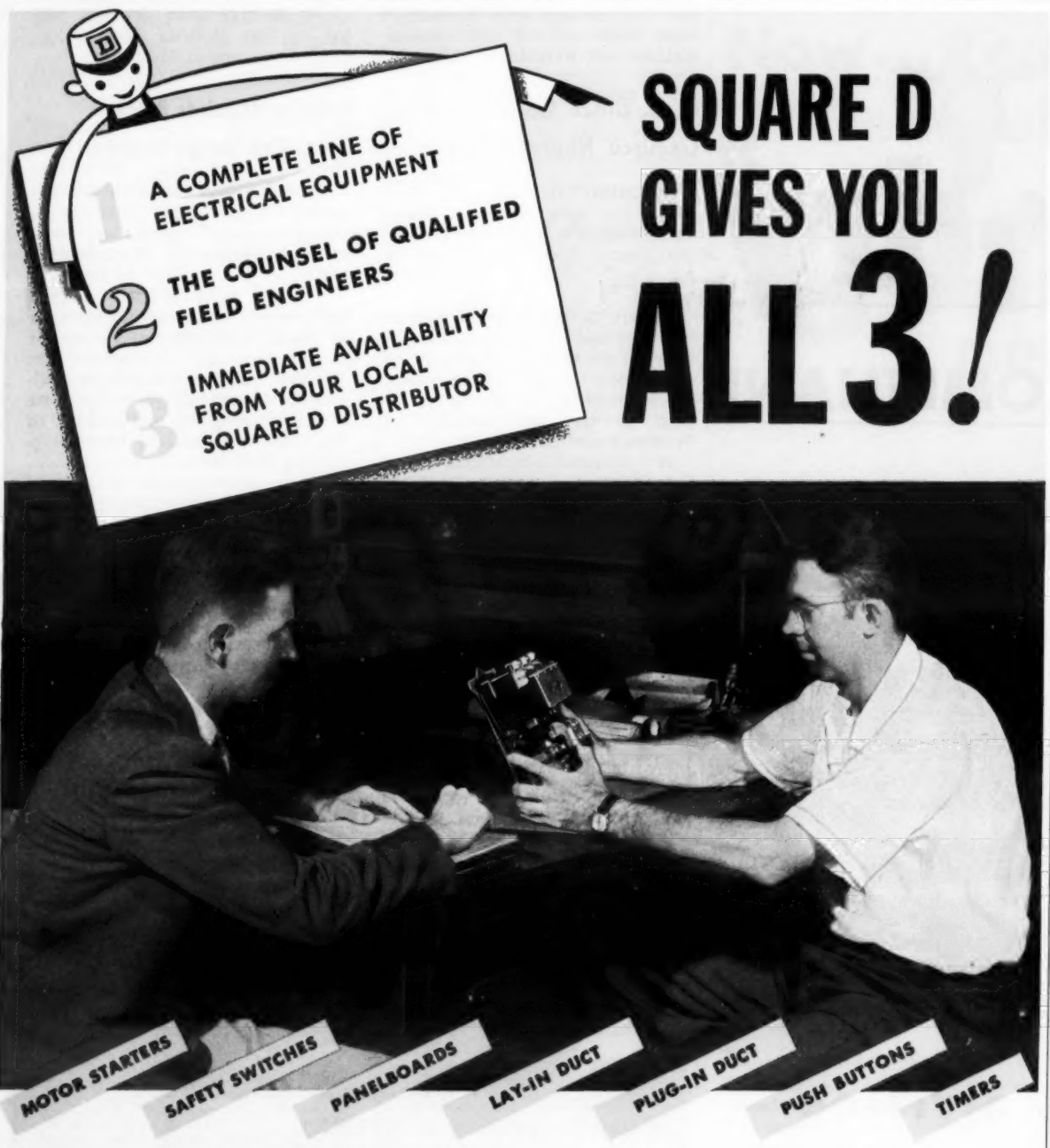

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SQUARE D COMPANY

Model EF-20 (SCEWC)
20 gal. cap.
5 ft. long
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40 gal. cap.
7 ft. long
Sell ALL the features
WITH THE NEW
Everfrost
FOUNTAINETTE SERIES
The Everfrost Fountainette Series offers a fully self-contained unit, including carbonator and compressor, in a range of sizes to fit every application. Only with an Everfrost Fountainette do you get a compact, packaged, ready-to-operate fountain that requires such a small amount of floor space . . . that is so easy to install . . . that is so economical to buy and operate. Why not write today for detailed information on the Fountainette Series, as well as the complete line of Everfrost Soda Fountain and Drink Dispensing equipment.
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Model EF-30 (SCEWC)
30 gal. cap.
6 ft. long
EVERFROST SALES, INC.
14815 S. Broadway • Gardena, California

INSIDE DOPE

Learn to live and laugh—
Thus delay your epitaph

By GEORGE F. TAUBENECK

(Concluded from Page 1, Col. 1)

driving at for the last six months.

Went to a lecture last week, George, and when the Toastmaster introduced the speaker of the evening he opened up with: "I'm sure Mr. Jones of the Soils and Fertilizer Department will give you a pleasant half hour. He's full of his subject."

Saw a sign in a Grocery Store, George, that read:

Please be polite to the Clerks. They're harder to get than Customers.

Drove down to South Bend, last weekend, and two men got off a bus. One had come to town for good. The other was a Marine on a furlough. Well, George, the old world is moving on at a terrific pace. You just gotta be on your toes all the time. Everything people say or do these days may have a hidden meaning. Even the little red school house may have something behind it.

Nobody over here, George, knows whether you wear china clippers or not; but let me tell you we over at the Creamery Package enjoy your chatter.

If you find yourself running short of horse laffs, maybe I can tip you off to a good barbecue stand where you can always stop and pick up a few ribs. In the meantime if you want to get away from any mower trouble lay off of cutting the grass. So lawn and Good Luck. God bless you.

HERBERT HESS

Decker Heating & Engineering
Alma, Mich.

Editor:

We have noted that any reader who sends in a printable joke will receive a free copy of your joke book, *You'll Love This One.* We are sending in the following two jokes:

A bachelor is a cagey guy
Who has a lot of fun;
He sizes up the cuties
And never Mrs. one.

The toughest problem some kids meet is that of learning good manners without seeing any.

E. M. DECKER

Joe F. Sobieski Service
Johnstown, Pa.

Editor:

I have enclosed several of our wall signs, which I have found effective. They really grow on you.

JOE F. SOBIESKI

P.S. Most of us have corrupted worrying into thinking.

Editor's Note: The sign:
"To hell with THINK.
"Let's all get to WORK."

Use Your Head

A thought-provoking suggestion is painted on one wall in the factory of American Electric Fusion Corp., Chicago manufacturer of production welding machinery:

"A strong man works only as hard as an ⅛-hp. motor. In eight hours, at $1 per hour, he can produce only 1 hp.-hour at a cost of $8. Electric power will do this work for 2 cents.

"Moral: Let the machine do it. Save your muscles, use your head."

Too Many Don't Read

Even excluding mental defectives, at least 40 per cent of the public does little or no reading beyond headlines and sports scores, and their lack of interest in pictures is probably equivalent, according to Dr. Emmett Betts of Temple university. He blames most of this preposterously high percentage of virtual nonreaders on bad teaching in regimented schools, which failed to arouse or, in some cases, even stifled interest in reading.

Doctor Betts holds that 20 per cent of all adults are "seriously retarded" in reading. That doesn't include mental defectives or people not bright enough to do any better. This category counts only people whose reading skill is so deficient that they are hampered economically, socially, and even emotionally.

Thus it can be deduced that a lot of direct mail and free-circulation publications are a waste of money.

Cascino Marketing Chief For Crosley-Bendix Div.

CINCINNATI — A. E. Cascino, formerly director of market research, has been advanced to the newly - created post of director of marketing for the Crosley and Bendix Home Appliances Div. of Avco Mfg. Corp.

A. E. Cascino

In establishing the new post and promoting Cascino, Parker H. Ericksen, Avco vice president and general manager of appliances for the two divisions, emphasized the importance of coordinating product design, planning, pricing, sales strategy, and merchandising. He said Cascino's new responsibilities would be to effect such coordination.

"The director of marketing also will have the responsibility of correlating marketing and sales activities and for advising top management of information and developments on market conditions, distribution, pricing, and other pertinent sales matters," the general manager said.

In the new position, Cascino will continue to function in all three phases of the business—appliances, home laundry, and radio-television, Ericksen explained.

Cascino, who has been director of market research for Crosley and Bendix since the consolidation of the two divisions a year ago, had held the same position with Bendix since 1946.

He received a bachelor's degree in economics at Northwestern university and a master's degree in that subject at the University of Illinois. He taught economics at Ripon college, Wisconsin, in 1944. He was chief economist of the durable goods branch of the Office of Price Administration in 1945 before joining Bendix.

Cascino has published several articles in various trade and business publications and recently co-authored a book sponsored by the American Marketing Association called "Marketing Channels."

Factory Branch at Buffalo Distributes I-H Products

BUFFALO — International Harvester refrigeration products will now be distributed through the company's direct factory branch at 487 Seneca St. here, advises J. R. Tidd, district manager.

C. S. Mitchell, manager of refrigeration, will be in charge of sales and service for 19 counties in western New York, Pennsylvania, and part of Ohio.

Product will be warehoused at Buffalo and Rochester. Company sales representatives will be located at Buffalo, Rochester, and Erie, Pa.

Philco, Birds Eye In Freezer Promotion

NEW YORK CITY—Philco Corp. and Birds Eye Div. of General Foods Corp. will jointly sponsor a national consumer contest this fall to promote home freezers and frozen foods, Owen H. Klepper, sales promotion manager for Philco's appliance division, announced at Philco's recent convention here.

The contest will run through October and November and will offer $40,000 worth of home freezers as prizes. These will consist of 125 Philco 8 and 14-cu. ft. freezers.

First public announcement of contest will be made on the Philco Television Playhouse on Oct. 3. A double-page spread in the Oct. 11 issue of *Life* will be run by Birds Eye.

"This is the first time two national companies such as Philco and Birds Eye have sponsored such a contest on a national basis," Klepper said. "The objective of the campaign is to further educate the consumer that bulk and quantity purchases of food are possible when a freezer is available in the home."

More than a million dollars in advertising and promotion are expected to be spent on the contest. Traffic aids will include a Birds Eye handy juice mixer which will be available to food markets and Philco dealers as a giveaway.

CONTINUOUS CONTACT ALUMINUM TUBING
freezes food faster at less cost.

Bohn aluminum freezing surfaces—provide a uniformly low temperature that assures the safest possible food storage. Seamless aluminum tubing is bonded to the aluminum plate in continuous contact. This provides better conductivity for faster freezing at less operating cost. Bohn aluminum freezer plates are also rust-proof to insure years of trouble-free service, and non-toxic for greater food protection.

NEW BOOKLET
"Bohn Products and How They are Made."
Write for free copy of this pictorial tour through Bohn plants.

EVAPORATORS • FREEZING PLATES • TUBING • COILS AND CONDENSERS
BOHN ALUMINUM AND BRASS CORPORATION
1400 LAFAYETTE BUILDING • DETROIT 26, MICHIGAN
Sales Offices: • BOSTON • CHICAGO • CLEVELAND • DAYTON • DETROIT INDIANAPOLIS • LOS ANGELES • MILWAUKEE • MINNEAPOLIS • MOLINE NEW YORK • PHILADELPHIA • ROCHESTER • ST. LOUIS

Bohn Freezer plates made with seamless aluminum tubing freeze food faster at less cost, provide uniformly low temperature throughout freezer.

SUPER-FLO
FILTER-DRIER

MOLDED REMCAL DRYING
FIBERGLAS DEPTH FILTERING
Check Super-Flo's amazing low price, for both original equipment and replacement, against ordinary driers which do not have Super-Flo molded drying elements, massive fiberglas depth filters and spun-end copper shells. Available to the trade through wholesalers everywhere.

REMCO INCORPORATED ZELIENOPLE, PA.

Refrigerator of the Future

12-Cu. Ft. Box with 3 Ft. of Frozen Foods Space, Smaller Compressor And Condenser, and Fewer Service Problems Predicted for 1960

HOUSEHOLD REFRIGERATION

SEATTLE—What's in the future for the household refrigerator?

By 1960 the average size will be 12 cu. ft., including 3 cu. ft. of frozen food storage space; latter will be colder while normal storage temperature will be slightly higher; the compressor and condenser will be smaller; service problems will be simplified, and more efficient production may reduce costs.

These are the views of A. J. Pfeiffer, manager of Refrigeration Engineering, Appliance & Electronics Div., Avco Mfg. Corp., who presented "The Industry Viewpoint" at the Domestic Refrigerator Engineering Conference held during the 41st semiannual meeting of the American Society of Refrigerating Engineers here.

50% of Refrigerators Are At Least 7 Years Old

"The National Electrical Manufacturers Association estimates that 50% of the refrigerators now in use are seven years old or older. This reminds us that a large number of 'in use' refrigerators are small in size because, in the year 1940, and immediately following World War II, the industry produced sizes that averaged 7-cu. ft. capacity, of which ½ cu. ft. was frozen food storage space," he said.

"Today, the average size manufactured is approximately 10 cu. ft., of which 1½ cu. ft. is frozen food storage space. Thus, in the span of the past 14 years, the average size enlarged 3 cu. ft., which represents a 43% increase. In the same span of years, the frozen food storage space enlargement from ½ cu. ft. to 1½ cu. ft. represents a threefold gain.

"Using these facts, it can be predicted, with a degree of assurance, that the future average size will gradually enlarge. Accordingly, in the year 1960, the average size will be 12 cu. ft., with approximately 3 cu. ft. of frozen food storage space.

"As you know, this size is available today and, presuming that it is the prevalent average size in the future, it may tend to supplant the need for the home freezer, except for the homemaking practices of wholesale buying of foods and the home freezing of fruits and vegetables.

Frozen Storage to Normal Storage Ratio May Shift

"By the same inference, the ratio of one-third frozen storage space to two-thirds normal storage space might not hold in the future refrigerator. Because of the growing use of frozen foods and because purchased frozen meals may be the next evolution in homemaking conveniences, the prevailing ratio of frozen storage space to normal storage space may become one half instead of one third," Pfeiffer suggested.

"The use of thin-wall insulation will provide more refrigerator storage per square foot of kitchen space. Conservatively, it can be said that the impending improvements in cabinet insulation will increase the volume of a 10-cu. ft. refrigerator by 36%, wtih no increase in exterior cabinet dimensions and no increase in cabinet heat leakage.

Insulation Thickness May Be Cut In Half

"This percentage increase in interior volume is based on the practical estimate of reduction of the insulating thickness from an average of 3 in. to an average of 1½ in. Thus, on paper here today, we have already acquired a 13.6-co. ft. volume in a 10-cu. ft. space.

"These proportions will have stronger appeal to the ever-growing builders' market in the built-in, or modular, type of cabinet that might be suspended on the kitchen wall with integral or remote high-side installation. Also, an alternative approach might be the built-in table top cabinet," he said.

"In the year 1940, the average refrigerator held an evaporator temperature range of between 20° and 25°, when operating at the normal cold control position, while the average cabinet temperature ranged between 45° and 50°. Today, the range of temperature of the frozen storage space is 0° to +10°, with an average normal storage temperature of about 38°.

Lower Frozen Storage Temperatures?

"Future design might see a lowering of the frozen storage temperature to an average of 0° and, perhaps, a slightly rising normal storage temperature to an average of about 40°. Thus, the trend will be colder frozen food storage temperature and slightly higher normal storage temperature.

"This lower frozen food storage temperature will be accomplished by the utilization of new and improved insulating material sealing the frozen storage compartment. The trend toward slightly higher normal storage temperature may result from the better insulated frozen storage compartment. Cabinet normal storage temperature, lower than 40°, might be deemed unnecessary and secondary to the more acceptable advantage of the colder frozen storage space.

"In step with the progress of cabinet design will be corresponding improvements in the refrigeration system. No matter where it is located, the compressor will continue to shrink in size. This is essential to the further increase in cabinet storage volume with existing or smaller exterior dimensions.

"Whether the compressor is located in the top of the cabinet or inside the cabinet at the back, or hanging on the back face of the cabinet, or within the confines of the cabinet at the bottom, it must become smaller and this shrinkage must be attained with increased efficiency and increased output.

"To achieve the ultimate in compressor size and cost, the higher speed two-pole motor-compressor might be adopted. It goes without saying that all of this must be accomplished without raising the accepted level of operational noise," Pfeiffer declared.

"As mentioned earlier, the evaporator will become larger and more efficient, with a probable decrease in refrigerant volume and a resultant decrease in refrigerant requirement. New types of evaporator construction are on the horizon and their improved performance will be linked to the design objectives of good drainage, ease of cleaning, and attractive appearance. The evaporator, or evaporators if you prefer, must appeal to the eye and to the instincts of cleanliness, in designs of simplicity and convenience.

Condenser Size, Efficiency

"Recent improvements in condenser size and efficiency might be the forerunner to further reduction in size. With the probable use of less refrigerant, smaller condenser volume will be required," he also said.

"The technique of capillary tube manufacture has improved the uniformity of the tube, which in turn will affect, to some extent, the uniformity of performance.

"The refrigeration unit system, while it becomes more complicated in structure, will not necessarily become more extravagant in design. Schemes in the design of a refrigeration system are dangerous and the industry will protect itself and the user to the fullest extent of its know-how. The objective of a balanced system without the use of gadgets can be achieved.

"Talk has been heard in the industry concerning the probable development of so-called electronic refrigeration. With the development of some of the semiconductors, it may be possible to obtain satisfactory room air conditioning within the foreseeable future by utilizing the Peltier effect.

"However, the use of the Peltier effect for household refrigeration does not seem to be within the realm of practicability, because the temperature difference between the hot and cold junctions of the circuit cannot be maintained at a large enough magnitude to give satisfactory results.

Rise In Automaticity

"The rise in automaticity of all appliances has given voice to the feeling of automation nightmare. Despite this, the sales creed is 'make it automatic and automatically you have a market.' Engineering and manufacturing, in acknowledging this, will continue to work diligently and further develop the courage to test and test and test again in their objectives of achieving success in the design and manufacture of foolproof products. Today's automatic automobile is a far cry from the model 'T' which, of course, had many years head start on the refrigerator in mass production.

"Likewise, the industries allied to us will continue to work faithfully with us in their supply of

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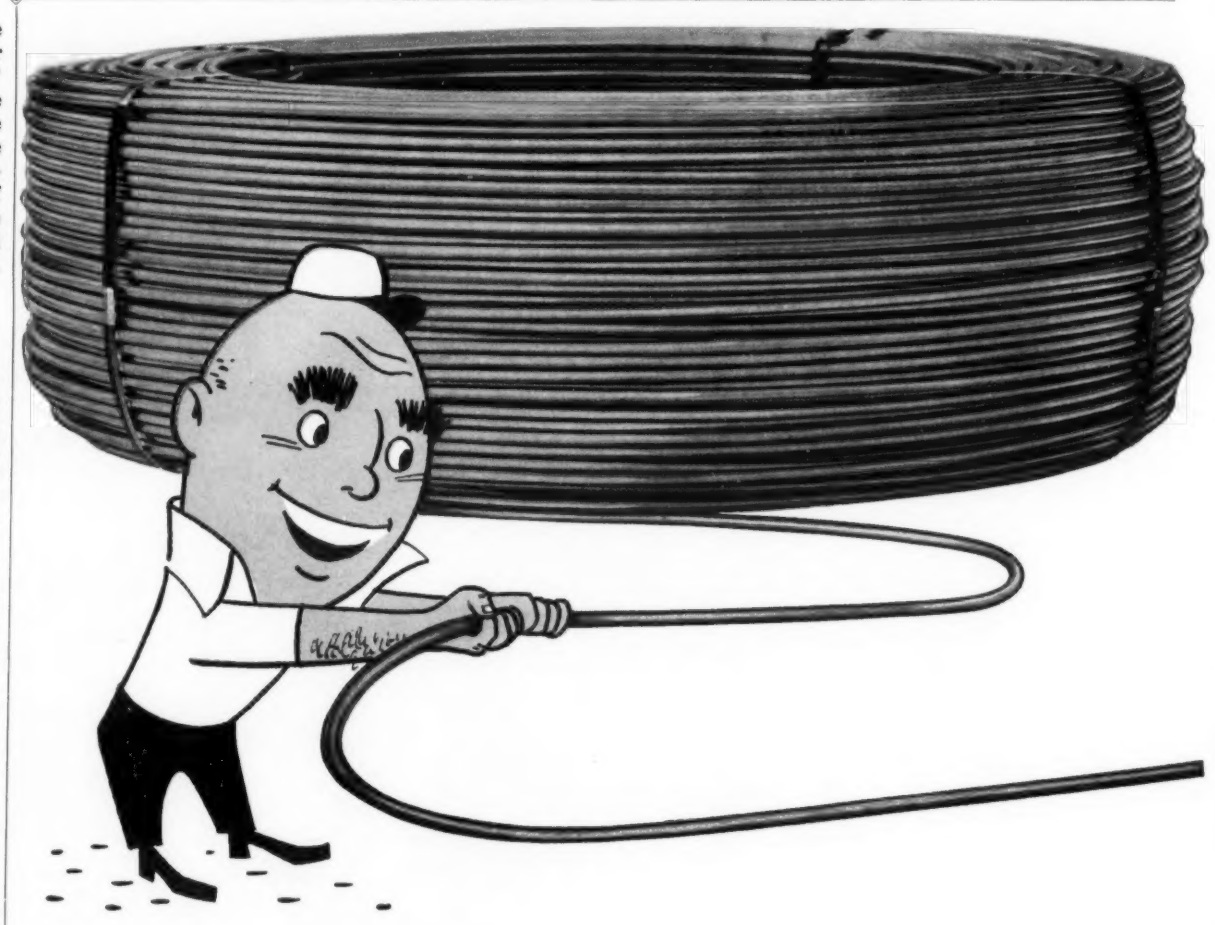


AIR CONDITIONING ENGINEER NEEDED FOR SALES AND MERCHANDISING

Well-established Mid-West air conditioning manufacturer now expanding operations to enter commercial air conditioning field on a national basis. We are seeking a specialist in this field who has some technical knowledge of air conditioning, and who also is experienced in merchandising, selling, and appointing and training of wholesale distributors. The products are packaged air conditioners of medium size for residential or commercial use. Salary commensurate with ability and experience. Reply in confidence to BOX A5024, Air Conditioning & Refrigeration News.

From fabrication to finished product... Bundyweld brings you real peace of mind

WHY BUNDYWELD IS BETTER TUBING

Bundyweld starts as a single strip of copper-coated steel. Then it's . . . continuously rolled twice around laterally into a tube of uniform thickness, and passed through a furnace. Copper coating fuses with steel. Result . . . Bundyweld, double-walled and brazed through 360° of wall contact.

← NOTE the exclusive Bundy-developed beveled edges, which afford a smoother joint, absence of bead and less chance for any leakage.

Bundy Tubing Distributors and Representatives: *Bridgeport, Conn.:* Korhumel Steel & Aluminum Co., 117 E. Washington St. • *Cambridge 42, Mass.:* Austin-Hastings Co., Inc., 226 Binney St. • *Chattanooga 2, Tenn.:* Peirson-Deakins Co., 823-824 Chattanooga Bank Bldg. • *Chicago 32, Ill.:* Lapham-Hickey Co., 3333 W. 47th Place • *Elizabeth, New Jersey:* A. B. Murray Co., Inc., Post Office Box 476 • *Los Angeles 58, Calif.:* Tubesales, 5400 Alcoa Ave. • *Philadelphia 3, Penn.:* Rutan & Co., 1717 Sansom St. • *San Francisco 10, Calif.:* Pacific Metals Co., Ltd., 3100 19th St. • *Seattle 4, Wash.:* Eagle Metals Co., 4755 First Ave., South • *Toronto 5, Ontario, Canada:* Alloy Metal Sales, Ltd., 181 Fleet St. East.
Bundyweld nickel and Monel tubing are sold by distributors of nickel and nickel alloys in principal cities.

XUM

Refrigerator of the Future--

(Concluded from preceding page)

quality components. Starting devices, temperature regulators, flow controls, timers, heaters, and other components will become more rugged and simplified and, thus, will continue to improve in dependability," Pfeiffer believes.

Improvements Since 1940

"Since 1940, the refrigerator has increased its worth in many ways. Automatic defrosting is a convenience that certainly eases the homemaker's chore. Shelves in the door have become a prominent utility. Butter conditioners locate the foodstuffs at the correct place and at the correct temperature. Movable shelves minimize stooping and hunting, and smoothly functioning crispers and drawers eliminate tugging.

"All of the practical conveniences in the present refrigerator will become increasingly popular and universal in future models.

"The frozen storage space has been located at the bottom of the cabinet instead of the top in a few instances. Naturally, the convenience of this inversion is debatable. Market analyses may not confirm a definite preference for quite some time. Independent home economic laboratories are justified in their reluctance to make a positive commitment.

"Thus, for some time to come and perhaps for all time, we will witness a mixture of models; some with frozen storage space at the bottom and some with the space at the top," he predicted.

"During the years, we have experienced a satisfying improvement in the ice cube tray. The youngster today does not know what it was to hold the ice tray under a flow of water to remove the cubes. Probably, the youngster tomorrow may not know what it was to handle an ice tray. Who knows?—by 1960 we may see an automatic novelty that will dispense chipped, flaked, or cubed ice.

Beverage Dispenser Has Mass Market Appeal

"The beverage or water dispenser seems to have mass market appeal and acceptance as a permanent feature of practical convenience. It is conceivable that this feature might evolve into a combination mixer and dispenser, mixing a frozen concentrate and dispensing the resultant beverage.

"Accessories will always exert an influence on the market, depending on their practicability and convenience. At one time, the meat keeper and crisper may have been considered luxury accessories; today, they are indispensable. Other accessories, such as compartmentized storage spaces for certain foods, will probably grow in popularity. Undoubtedly, there will be additional accessories of limitless variety, not yet dreamed of, some of which will strongly merit their existence in the product.

"Latching and hinging have had their innovations in recent years. The double swinging door, the pushbutton latch, and the magnetic latch may become more familiar adjuncts to the product in the future.

Use of Plastics Has Increased Since 1940

"Plastics of all kinds have increased tremendously in usage since 1940. Cost, appearance, cleanliness, and a low coefficient of thermal transfer are the reasons. A range of 10% to 15% of the total weight of today's refrigerator is comprised of plastic parts of all shapes and sizes. This usage will undoubtedly grow, not so much in the increased number of parts but in the use of larger-sized parts, such as the food liner which will greatly enhance the present weight ratio.

"Food preservation by atomic radiation will ultimately become a commercial reality. But atomically preserved foods will not eliminate the need for the refrigerator. Some foods, like ice cream, lettuce, and watermelon, will require freezing or chilling and beverages, like beer, milk, and the highball, will require chilling or the use of ice cubes. Hundreds of such food items will not permit the displacement of the refrigerator," Pfeiffer commented.

"Synthetic enamels for the interior and exterior have advanced equally with the general improvements in the product. Of great importance is their increased resistance to fading and staining. Exterior color is back again and the stability of the brilliance of color is most essential. The basic gleaming white will be increasingly relieved with touches of color, and other decorator treatments, to harmonize with home interiors.

"With the advent of color in the greatest demonstration and selling medium on earth—television—the widespread use of multicolors on the refrigerator may become a mode comparable to today's multicolored automobile. As occurred with the automobile, this trend will be gradual because of the inherent conservatism of the mass market, but we can be assured that color will be a positive growth," he said.

Modern Production Methods Will Control Prices

"And now, consideration of all of these advancements brings us face to face, as usual, with the demon in our lives—the dollar sign. How are we going to do all this at a price that Mrs. America can afford? The answer is that we are doing it today at a reasonable retail price, and we will do it more efficiently in 1960.

"This may sound like an optimistic statement and it is impossible to document the reasons in a discussion of this kind; however, all one has to do to wholly convince himself of this is to visit our modern refrigerator plants. In them, you can view tremendous strides in production engineering and production control, and advanced progress in precision manufacture and quality control.

"Whether the model complement of a line are many or few, and color will increase the model complement, you can be assured that production will retain its economic balance. In the latter thirties, a 5-cu. ft. refrigerator retailed at $35 per cubic foot, including accessories. Today, an 8-cu. ft. size, in the same exterior dimensions and with the same complement of accessories, retails at about $25 per cubic foot, including taxes," Pfeiffer reminded the conference.

Service Will Be Simplified

"Improved methods of manufacture and engineering design will tend to simplify service on the more complex refrigerator. Dehydrated components, perfected by factory testing, might be installed separately in the cabinet and then tested as an assembly in the completed refrigerator. This method may tend to lower assembly costs and insure a higher quality product, with a resultant need for field replacement of the compressor only, very much simplifying the serviceman's problems.

"Much of this might seem to be a dream or a projection beyond the year 1960 but one thing is certain, that the refrigerator industry is buzzing with the potentialities of things to come, which keeps all of us high on our toes. What's wrong with an industry projection that indicates improved performance and appearance with higher quality, and greater utility in larger sizes at lower cost, demonstrated by television and clamored for by everyone. It is a dream of progress that has pioneered all industry.

Competition Will Make Changes Come Rapidly

"The stature of this industry and the nature of its market demand creative efforts, skillfully accomplished, the likes of which have just begun. To say that competition is apparent would be the master understatement of all time. And, because product development and manufacturing skill thrive on competition, the refrigerator will change by leaps and bounds."

Sanberg Quits as Mgr. of Twin Cities Dealer Group

MINNEAPOLIS—Tom Sanberg, managing director of the Electric Appliance Dealers Association of Minneapolis and the St. Paul Appliance Dealers Association, has resigned to accept a position with Associated General Contractors of Minnesota, it was announced recently.

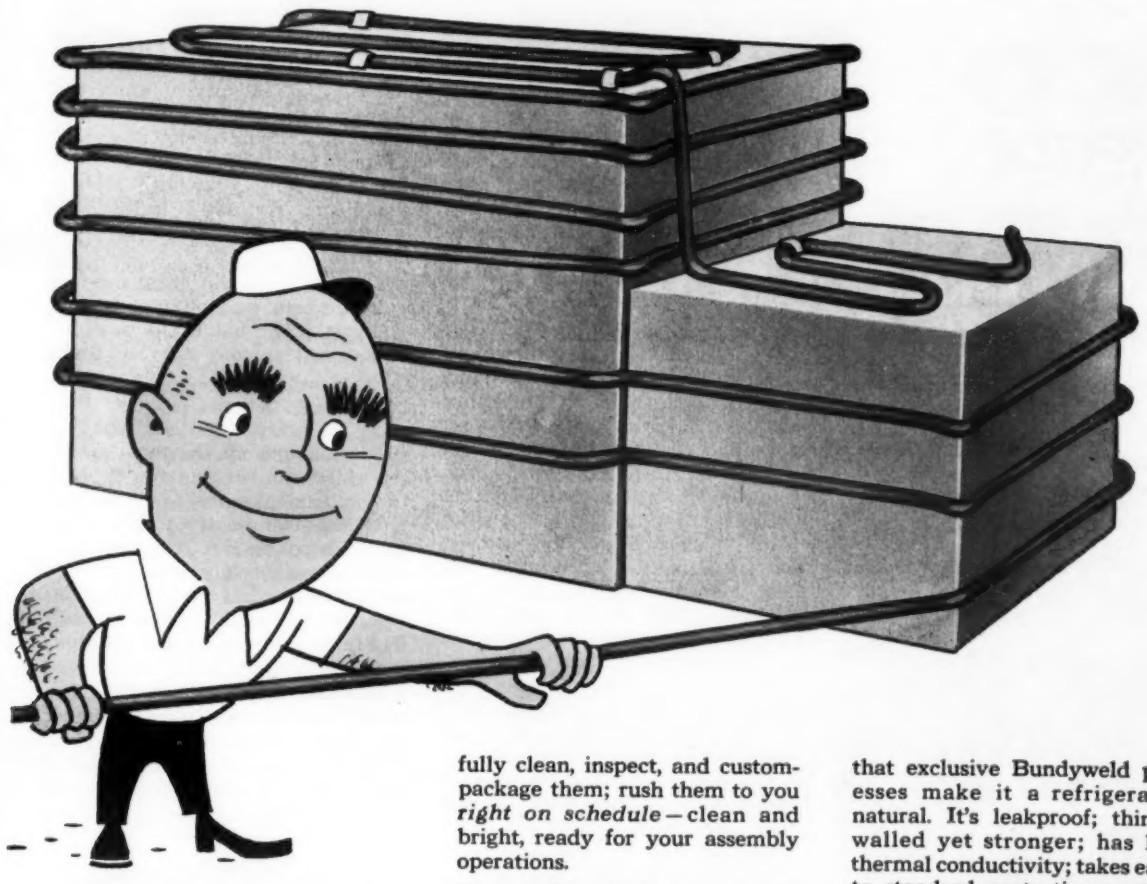
For the time being, both associations will function without a managing director. Arrangements have been made with North Central Electrical League to provide certain secretarial services for the groups until the close of their fiscal year.

Maytag Promotes Two In Marketing Division

NEWTON, Iowa — Two major promotions in the marketing division of the Maytag Co. have been announced by C. G. Ely, general sales manager.

William C. Green has been appointed manager of the Cincinnati branch, succeeding the late L. F. Webb, who died June 28.

Gerald E. Ankeny, former assistant manager of the Richmond branch has been appointed to the newly-created position of assistant sales manager at Newton, working under the direction of Ely.



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You'll get rid of most of your tubing headaches, gain real peace of mind when you specify dependable Bundyweld Tubing for your condensers, compressors, evaporators, refrigerant lines, other tubing parts. Here's why:

If you do your own fabricating — whether you use coils up to 4000′ long or straight lengths, you'll get clean, bright, ready-to-use tubing, shipped *on time*, exactly as specified.

If you require fabricated tubing parts — we're geared to produce them to your requirements; carefully clean, inspect, and custom-package them; rush them to you *right on schedule* — clean and bright, ready for your assembly operations.

If your tubing designs are simple or complex — we're ready to turn them out as quickly, accurately, and economically as possible. Whether your designs call for serpentine coils, swaging, flattening, expanding, brazing, saddle jointing, bending to small radii, piercing, upsetting, slotting, threading, angle cutting, notching, flanging, flaring, reducing, tapering, other fabrication operations, or combinations of the above, we offer you the industry's most versatile fabrication facilities.

If your product requires absolutely reliable tubing—you'll find that exclusive Bundyweld processes make it a refrigeration natural. It's leakproof; thinner-walled yet stronger; has high thermal conductivity; takes easily to standard protective coatings.

If you need engineering assistance — our skilled engineers will draw upon their years of experience to help solve your tubing problems, perhaps show you ways to cut fabrication costs and save on materials, too. Whether you fabricate your own parts or wish Bundy to do the job, you're welcome to use our excellent engineering services. Call, write or wire us for information or for assistance on your tubing problem.

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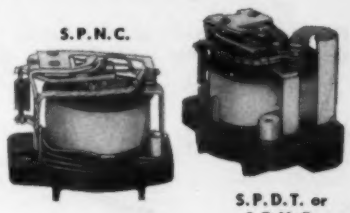

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To Make Money

Sell Products In 'Profit Era', Try To Close Every Sale on First Call, Terhune Advises

Commercial Refrigeration

DETROIT—"You're a sucker to try to sell a product with less than 10% market saturation," E. A. Terhune, vice president of the commercial division, Jordon Refrigerator Co., told a group of commercial refrigeration and hotel and restaurant supply distributors here recently.

"And when the market saturation gets above 40 to 50%, it's out of your class and you had better get yourself a new specialty," he added.

He described the period between the 10% and 50% saturation as the "profit era" for any product. At this stage, he said, the product is on an "escalator sales curve," when you take one step and go up two. Room coolers, store coolers, and most commercial refrigeration equipment fall into this category, he declared.

Commercial refrigeration has been up the escalator curve a couple of times and has slid back as new uses were developed for it. As prime examples, he cited the frozen food storage freezer, particularly the upright type, and the dry bottle cooler.

Terhune explained that when a product has less than 10% market saturation, it is in the pioneering stages. Sales volume is low and profit is nil. "Even if you did all the business available for that product, you wouldn't do very much," he said, "and there's no money in it."

"Then when a product gets over the 40 to 50% saturation mark, sales are high, but any clerk can sell it. Everybody carries it and the dealer's pitch is 'come and get 'em, we've got all brands.' Then you are in a price fight and won't make any money either."

TECHNIQUE TO CLOSING

Then, assuming the distributor has a profitable product to sell, Terhune emphasized the need to develop the technique of closing the sale on the first call, or at least with as few call-backs as possible.

"It costs good money to call on prospects," Terhune said, "and the faster you can close the sale the less it is going to cost you."

He then explained his formula for the "one-stop sale," which he said would work whether the salesman is selling Jordon refrigerators or fur-lined hot water bottles.

There are five steps to making the sale, Terhune declared—getting attention, getting interest, telling the product story, answering objections, and closing.

"If you can't master the prospect on any one of these steps, you're done," he asserted.

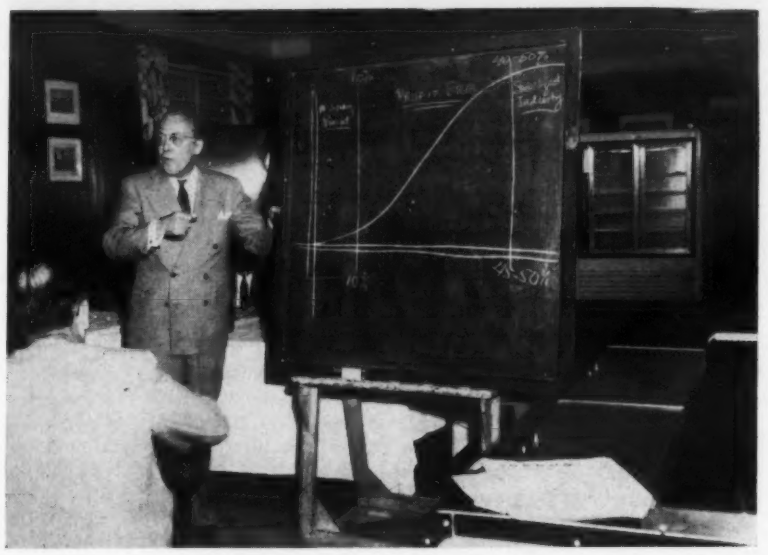
"Don't talk to anybody until you can get his attention," Terhune advised. "If you try, you are just wasting your breath."

He gave as an example a young salesman who called on a grocer and chased him around the store as he waited on customers, trying to present his story. Terhune said he stopped the salesman from doing that. He took him by the arm and led him into the backroom and explained about getting attention.

"What are you going to do now?" the salesman wanted to know.

"Nothing," Terhune replied. "In a few minutes, that storekeeper is going to come back here to see what we are stealing. Then we will have his attention."

Once attention is gained, the next step is to capture interest. "From the standpoint of interest," Terhune declared, "the first 30 seconds are the most important. You have just that much time to tell the prospect what you have that will interest him. If your story is not strong enough to interest him in 30 seconds, you won't get his interest at all."



THE PROFIT ERA, the time when a product is between 10 and 50% saturation, is the time for the specialty salesman, E. A. Terhune, Jordon commercial vice president, explains to Detroit area restaurant equipment distributors.

Don't waste time on preliminaries, he advised. Get right down to cases.

When you get the prospect's interest, then tell him your product story. But don't tell him about the nuts and bolts and the wonderful company that makes it. He isn't interested in that. Tell him what the product will do for him. How it will answer his needs. How he will benefit.

DON'T FEAR OBJECTIONS

When you have presented your story, don't be afraid of objections, he said. They are your stepping stones to the sale. But, Terhune emphasized, make the prospect give you all of his objections first before you start answering them. Don't make a move until you have them all so that you can qualify your prospect. If you try answering them one at a time, he will have you coming back again and again and will raise a new objection as fast as you can answer the previous one.

If the prospect asks what the price of a refrigerator is, you have no right to tell him that it will cost him whatever the list price is. Once you tell him the list price, of course he can always try to beat your price down.

Instead, tell the prospect what it will cost him per day. Amortize the equipment over its expected life and show him where it will only cost him a few cents a day.

"A grocer," Terhune related, "pays his breadman $2 a day out of the cash register when he delivers a load of bread. He doesn't think a thing about it. And yet he is paying out $6,000 in 10 years to his breadman. But if the breadman were to ask him to sign a contract for $6,000 worth of bread, the grocer would yelp. So don't get into a price fight."

The four worst words in the salesman's dictionary, Terhune asserted are "Yes, but not now." When the prospect utters those words, the salesman is baffled. The prospect agrees that he needs the equipment and he is willing to buy—but he won't sign the contract.

When this happens, Terhune declared, the difficulty if that you haven't made the prospect believe your story. Belief comes at a 50% discount and it takes 75% to make the sale. Only your own mother would give you 100% belief, Terhune added, but there is no profit in the sale.

You can have the finest product in the world and offer it at the cheapest price, but if the prospect doesn't believe your story, he won't buy.

You can't tell the prospect anything on your second call that you didn't tell him on the first—or on the third call, or the fourth call. Or you can take him to a user and have the user testify to the value of the product. But it is not until the prospect really believes your story and you have kindled the desire for the product, that he will finally put his name on the contract, Terhune noted.

Terhune was introduced to the dealers by Walter Hirschberg, Jordon district manager in Michigan, who also pointed out features of new Jordon commercial refrigeration equipment on display.

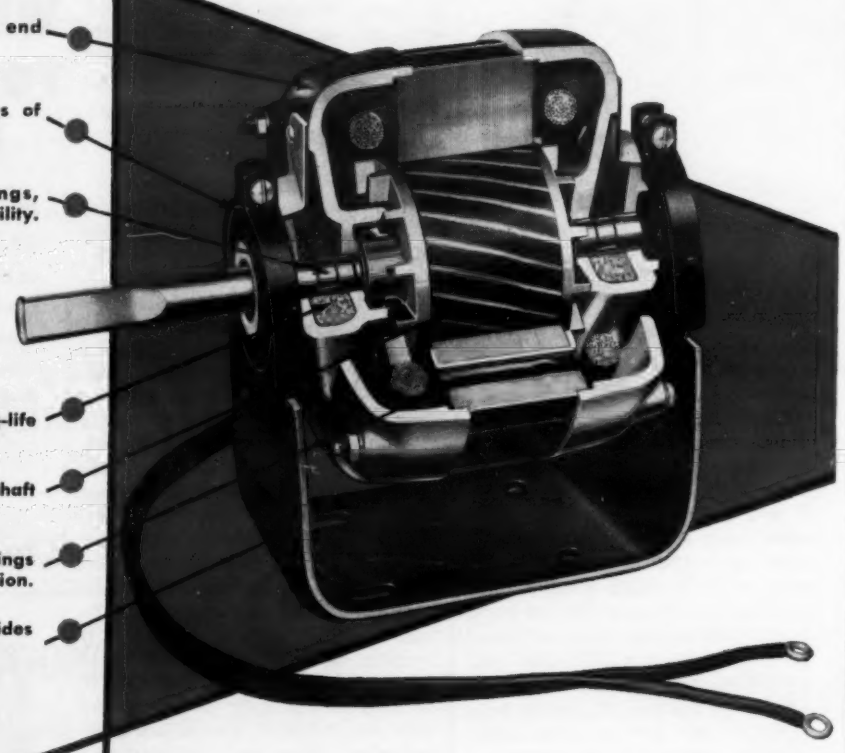
McCray Moves Chicago Branch to Oak Park

CHICAGO—The Chicago branch office of the McCray Refrigerator Co., Inc. has recently moved into new quarters at 639 Madison St., Oak Park, Ill., G. A. Brandt, branch manager, announced recently.

Telephone number is Village 8-0670.

Check these 7 BIG reasons why

DELCO SHADED-POLE MOTORS are favorites in their field!



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Heavy-gauge steel base provides greater rigidity and strength.

Delco shaded-pole motors, available from 1/40 to 1/12 horsepower, are specifically designed to move air in heating, ventilating, refrigerating and air-conditioning applications. They have a long, trouble-free life and operate with a minimum of noise and vibration.

These are some of the reasons why a Delco motor is the best running mate your product can have.

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Programs Set for Dealer Meetings In San Francisco, Seattle This Month

SAN FRANCISCO — Nationally recognized authorities on appliance merchandising, television service, finance, salesmanship, and business management will address the first NARDA Regional Meeting to be held in this area.

It will be at the Merchandise Mart here, on Sept. 17. Approximately 200 of the Bay Area appliance dealers are expected to attend the all-day meeting, according to Carl O. Hagstrom, vice president of NARDA and program chairman for the San Francisco Bay district of NARDA, sponsors of the meeting.

The dealers will be welcomed by Clarence Dulfer, president of the Bay District organization, and will learn from spokesmen for Pacific Gas & Electric Co. about promotional plans for the coming months.

Advice on how to sell low saturation appliances will be given the dealers by Howard Scaife, general sales manager of Hotpoint. Joseph Rushton, manager of Frigidaire's major dealer division, will review the manufacturer's and dealer's contribution to the the sale.

Arthur Scaife, manager of sales planning, Small Appliance Div., General Electric Co., will speak on "Small Appliances As We See Them."

Lloyd Mazzera of the Bank of America will describe the various methods of appliance financing and review some of the techniques for granting and using credit effectively.

"Stop Losing Money on Television Service," is the subject of a talk by television service veteran Russell Hanson, manager of the contract section, service department, Motorola. Hanson was formerly an executive of the RCA Service Co.

Suggestions on understanding and selling to women will be offered the dealers by Jesse Cartwright, home service director of Norge.

Final presentation of the day will be by H. B. Price, Jr., president of Price's, Inc., Norfolk, Va., and a vice president of NARDA.

Registration fee, including luncheon, will be $5 per participant. Registration will begin at 9:30 a.m. in the Green Room of the Merchandise Mart, and luncheon will be held in the Mart Auditorium.

Officers of the San Francisco NARDA dealer group are: president, Clarence E. Dulfer, Dulfer's; vice president, Harry S. Lacey, Maxwell Hardware Co., Oakland; secretary-treasurer, Jack Dreyfuss, Wisnom Appliance, San Mateo.

Dulfer also serves as regional chairman of the state of California for NARDA. Regional vice chairmen include Fred W. Rock of Oakland and H. A. Witham of Bakersfield.

Market." Leo Weisfield, president of Weisfield's stores, will talk on "Credit Selling."

Al Bernsohn, managing director of NARDA, has the topic "When We Work Together," and Jesse Cartwright, home service director of the Norge Home Institute, will relate some of her experiences in this field.

Other yet unnamed speakers will discuss service management, customer relations, collecting for service calls, trade-ins, and selling used merchandise.

Registration fee for the session will be $12.50. This includes breakfast, luncheon, and evening banquet, according to Lib Tufarolo, NATA president. Reservations are now being taken at association headquarters at 512 First Ave. N. here.

Northwest Dealers Hold 2nd Profit Clinic Sept. 22

SEATTLE—Second annual "profit clinic" of the Northwest Appliance and Television Association will be staged in the Ben Franklin hotel here on Sept. 22, Chic LeCuyer and Ken Lindsay, co-chairmen of the event, announced recently.

Scheduled to address dealers attending the event is Harry Price, vice president of the National Appliance and Radio-TV Dealers Association, who will speak on "Today's Problems in Appliances."

Carl Hagstrom, owner of one of California's largest retail appliance firms, will talk on "Operating as a Discounter and Operating as a Legitimate Dealer." Cecil Musberger, Montana appliance dealer, will discuss "Selling in Today's

Wonderbars Loaded Free In Arkansas Motel Court

FAYETTEVILLE, Ark.—Something new in motel service to the traveler is the "free-loaded" Wonderbar in each of eight modern cabins of the Twin Arch Motor Court here.

Each of the Servel portable electric refrigerettes is filled every day with bottled soft drinks, a pitcher of cream, and a pitcher of water. On the top of the Wonderbar is placed a tray with an eight-cup percolator ready for use, complete with coffee "makin's."

Woronov Is Sales Mgr.

SYRACUSE, N. Y.—E. M. Woronov has been appointed sales manager of the appliance division of City Electric Co., 514 W. Genesee St., it was announced by J. S. Isaacs, president. Woronov has been city sales representative of the firm for the past four years.

Dryer, Dishwasher Sales Soar In Philadelphia

PHILADELPHIA—July was a good month for clothes dryers and dishwashers, but not so good for other major appliances or air conditioners, a report issued by the Electric Association of Philadelphia indicates.

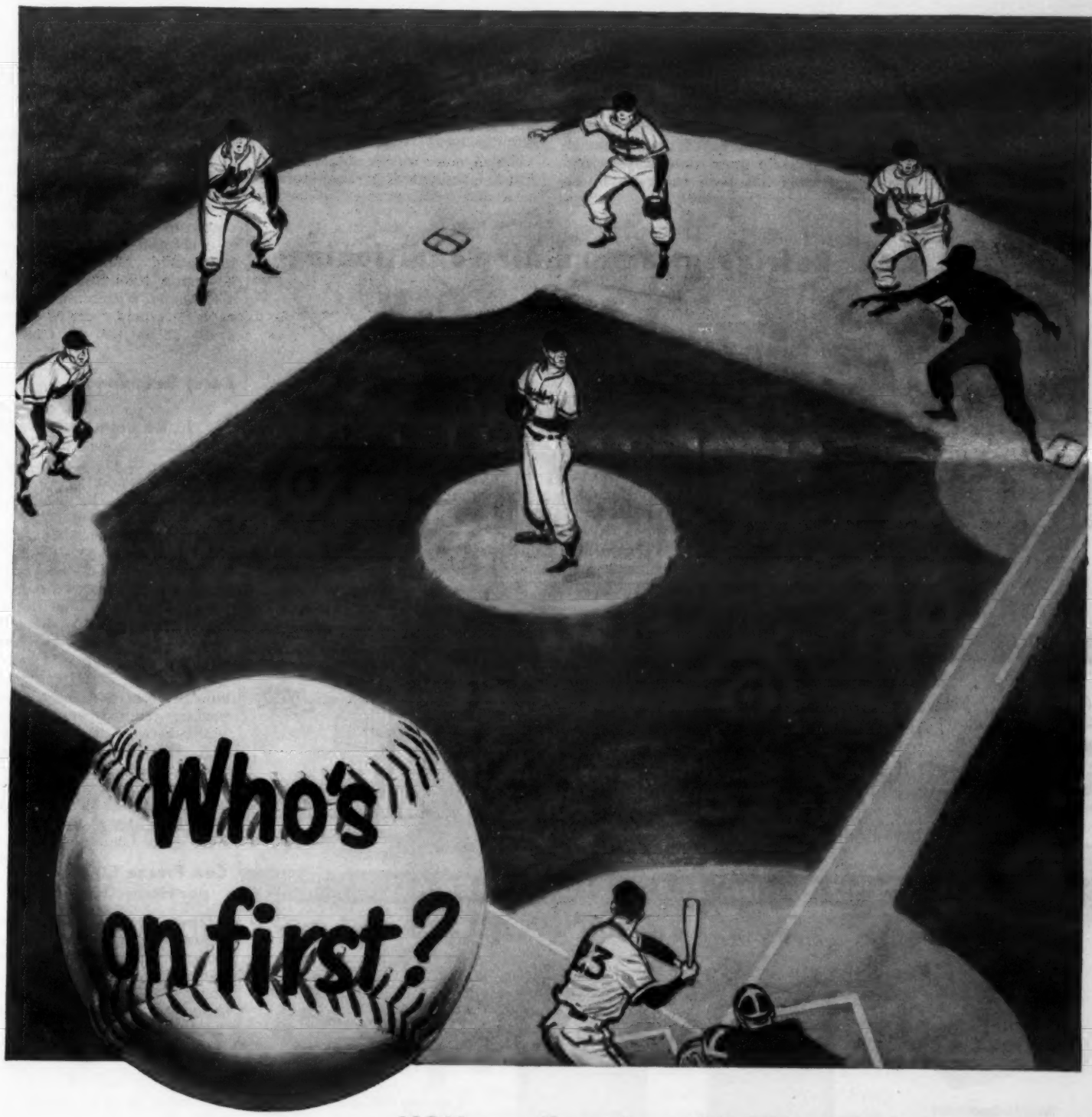
Covering sales by distributors in the counties of Bucks, Chester, Delaware, Montgomery, and Philadelphia, the report found clothes dryer sales up 87% over July, 1953 and dishwasher sales up 97%.

But electric range sales were down 20%, water heaters 21%, home freezers, 22%, refrigerators 32%, and air conditioners 59%.

For the first seven months of the year, air conditioner sales were 22% better than in the same period of 1953. Dishwasher sales were up 25%, ranges 19%, and clothes dryers 11%. Refrigerator and water heater sales were down 12%, and home freezer sales 37%.

Comparative unit sales for the various appliances were as follows:

Appliance	July-1954	July-1953	Total Jan. to July 31, 1954	Total Jan. to July 31, 1953
Air Conditioners	1,585	3,854	29,646	24,237
Clothes Dryers	762	407	4,700	4,211
Dishwashers	549	278	3,150	2,515
Home Freezers	847	1,074	5,407	8,533
Ranges	1,188	1,479	10,430	8,737
Refrigerators	5,998	8,743	39,988	45,263
Television	8,608	8,879	62,962	75,269
Water Heaters	774	978	5,187	5,855



...YOU are, if you're a Frigidaire Dealer!

IN BASEBALL, the first object of the game is to get on first base. The same thing holds true in the appliance industry. And a dealer who is granted a Frigidaire franchise *is automatically on first base!*

He's on first base because Frigidaire's leading position in refrigerator sales has put him there—like a clean single to center. And he's on first base because of Frigidaire's sensational rise to the top in electric range sales.

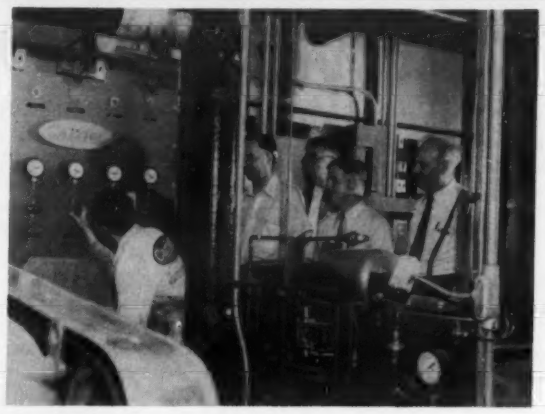
No competitive "pitcher" is going to pick him off first base, either—because he's solidly entrenched there by the outstanding salability of Frigidaire Laundry equipment—of Frigidaire's great Food Freezer line, Water Heaters, Dehumidifiers. And his safety is doubly assured by such sales-winning features as Cycla-matic Defrosting, Roll-to-You Shelves, new Color Styling, Lifetime Porcelain, Live-Water Action, Rapidry Spin and other outstanding, top-flight, first base "coaches".

Yes, Frigidaire's sales leadership puts Frigidaire Dealers on first base—and what brings them around the bases to score every time is everything else Frigidaire offers its dealers . . . all the factors that combine to make the Frigidaire franchise the most valued in the industry.

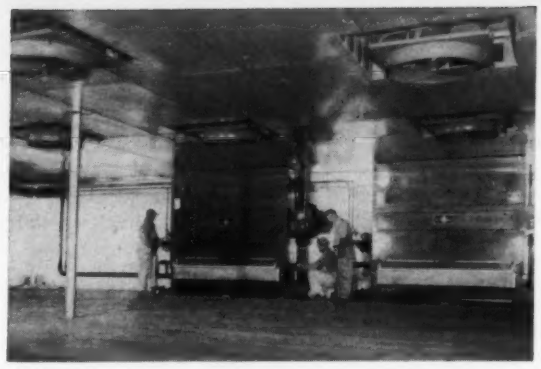
Frigidaire

Built and backed by General Motors

RACKS OF BREAD being quick-frozen at -20° F. at Arnold Bakers, Inc., Port Chester, N. Y. Bread is put into the quick-freezing room within four to six hours after being baked, normally cooled, and packaged in tightly sealed double wrappers.



SERVICEMAN CHECKS pressure settings on compressors as new bread freezing and storage plant is put into operation. Standing, left to right: David Snow, Freezing Equipment Sales, Inc.; H. F. Lowe, district engineer for Niagara Blower Co.; Leonard Patridge, director of engineering for Arnold Bakers; and H. Hanson, Carrier Corp. engineer.



FINAL TEST is made of refrigeration units in quick-freezing room before full operation is started.

Freezing Bread on Big Scale

Plant Specifically Designed for Commercial Freezing of Bread Products Has 12,000 Cu. Ft. of Storage, Serves Customers In 400-Mile Radius

PORT CHESTER, N. Y.—Full-scale operation of the new bread freezing and storage plant of Arnold Bakers, Inc. here was announced recently by Paul Dean Arnold, president.

With its new plant, reportedly the first refrigeration plant designed specifically for bread products, Arnold looks forward to more efficient distribution in its distant markets, with eventual expansion of sales to those parts of the country where premium bread products are not now generally available to consumers.

Since it pioneered in the sales of quick-frozen bread on a commercial scale more than a year ago, Arnold has been using public facilities in another city for refrigeration and storage of its frozen products.

"Now that we have our own refrigeration plant," Arnold said, "we will be able to freeze bread at the peak of its freshness, only minutes away from the oven.

"Also, since we can stockpile our full line in the refrigerated storage space right at the bakery, we will be able to give faster and better service to our distributors, especially on those items where the demand fluctuates widely."

After normal cooling and wrapping, the individual bread loaves are placed on racks, which are then wheeled into the freezing room. There, the bread is quickly frozen at -15° to -20° F.

The racks are then moved to the packing room where the frozen bread loaves are put into cartons. From there the cartons are taken to the storage room where the frozen bread is kept at 0° F. until it is shipped in refrigerated trucks to Arnold distributors in cities beyond a 400-mile radius of Port Chester. (Within the 400-mile radius, Arnold's distributors generally do not sell the frozen products).

Room To Expand

The new plant cost approximately $110,000 and it will cover nearly 9,000 sq. ft. It will provide nearly 12,000 cu. ft. of refrigerated storage space, in addition to the quick-freezing room, the packing room, a truck bay, the compressor room, and space for possible expansion later.

The entire cold box area consists of the quick freezing room, the packing room, and the storage room. The packing room is located between the other two. The entire area is enclosed by insulated walls, ceiling, and floor, with insulated door for entrance to the packing room. Doors are also provided between the packing room and the freezing and storage rooms.

Both the freezing and storage rooms measure 40 by 40 by 10 ft. and both have hardwood floors over glass fiber insulation.

Can Freeze 1,000 Lbs. per Hour

The quick freezing room contains two finned coil spray units equipped with an air circulating fan and spray pump. Provision is made for a third unit. Niagara "No Frost" liquid is used for the spray solution. Each unit has 7 tons capacity while normal air circulation is 11,000 c.f.m. Freezing capacity of the room is 1,000 lbs. per hour on the average at -15 to -20° F.

A plenum chamber is provided in the ceiling of the room and is equipped with seven ¾-hp. fans for additional circulation. The manually controlled fans have 11,000 c.f.m. capacity each. Provision is made for installing additional fans when increased capacity is required.

Two thermostats with a range of -50 to 20° F. control the operation of the two compressors serving this room. An additional thermostat is set at 0° F. to operate the warning light on the main control panel.

2-Stage Compressors In Separate Room

The compressors, located in a separate compressor room outside the cold box area, operate in a two-stage system. The first stage compressor is a 30-hp. Fuller rotary unit using "Freon-12." It has a 206 c.f.m. displacement and operates at -5.5 in. vacuum to 37 p.s.i. discharge.

The second stage compressor is a 25-hp. Carrier multi-cylinder reciprocating unit with 73 c.f.m. displacement using "Freon-12" oper-

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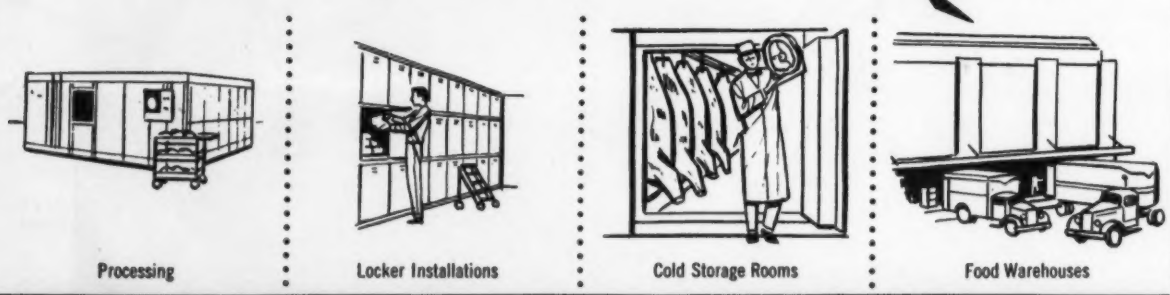
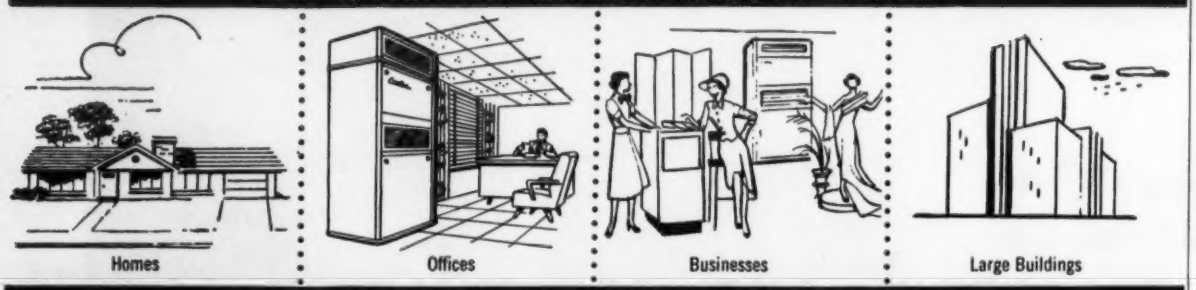
Curtis Refrigeration and Air Conditioning

Gives You More Jobs to Sell...



ALL KINDS OF REFRIGERATING JOBS



AIR CONDITIONING JOBS—BIG AND SMALL

Room Air Conditioners
Packaged Air Conditioners 2 to 10 tons
Condensing Units up to 80 Tons
Combination Heating-Cooling Units
Evaporative Condensers, Cooling Towers, Matching Air Handling Units

When you handle the Curtis Line, you're ready for practically any profitable job in the field of air conditioning and refrigeration. You're ready to satisfy customers with the industry's top quality equipment line. You're ready to take advantage of Curtis' national advertising in *Saturday Evening Post, Time, Newsweek* and other well-read publications.

It makes profit sense to sell Curtis. To learn if you qualify for a direct factory franchise, write on your company letterhead.

1854 100 years 1954
OF SUCCESSFUL MANUFACTURING EXPERIENCE

Curtis REFRIGERATING MACHINE DIVISION
of Curtis Manufacturing Company
1912 Kienlen Avenue, St. Louis 20, Missouri

809

MOTOR BASE ADAPTERS Sell Many Other Items

Keep them in stock. Servicemen will pick up adapters and motors, carry them in their cars, and complete service on the job in one call. Eliminates delay of having motors away for rebuilding. Adapters are easy to install, fit any base. No rotor shaft too long or too short. They also bring you more sales in motors, belts, pulleys, controls, etc.
SIZES FOR ⅓ to 3 H.P. Inclusive
Engineering Research Associates, Inc.
3475 East Nine-Mile Road
Hazel Park, Michigan

KNOW THE NEW MOTORPUMP

and Find Out How it can help you do a better job of every installation —cut costs—increase over-all profits, with:

IMPROVED HYDRAULICS:
New design and construction features that give improved performance over its entire range of heads and pressures.

GREATER SPACE SAVINGS:
More compact, this new Model fits anywhere, does the maximum job in a minimum space.

LIGHTER WEIGHT:
Improved design makes the new KRVSA the top performer in the field.

You should know more about Motorpumps; to get the whole story, mail the coupon to:

Ingersoll-Rand
11 Broadway, New York 4, N. Y.
MOTORPUMP

Gentlemen:
I would like to know more about how the Motorpump line can improve my jobs, help cut my costs. Send me details.

NAME_____
TITLE_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE_____

9-62

Built for Fluctuating Market--

(Concluded from preceding page)

ating at 37 p.s.i. suction and 125 p.s.i. discharge.

The storage room is equipped with a single finned coil spray unit equipped with an air circulating fan and spray pump. It also uses the Niagara No Frost liquid as the spray solution and has a capacity of 4 tons of refrigeration. The unit is equipped with two directional outlets at the ceiling and the fan has a normal air circulation of 3,750 c.f.m.

A thermostat with a range of -20 to 50° F. controls compressor operation while an additional thermostat set at 10° F. operates a warning light on the main control panel. The compressor, also located in the compressor room, is a 10-hp. Carrier multi-cylinder reciprocating unit.

The packing room measures about 15 by 40 by 10 ft. and has a concrete floor over glass fiber insulation. An underfloor heating coil consists of four-pipe coil grids with ¾ i.d. pipe spaced on 12-in. centers. Fuel oil is circulated in the pipe coil at 70° F. at a minimum rate of 12 g.p.m.

Conveyors Carry Bread From Freezing to Packing

Conveyors will be provided to handle the frozen bread from the quick freezing room to the packing room and the packed cartons from the packing room to the storage room.

In addition to the compressors, the compressor room also contains an evaporative condenser, main control panel, and concentrator for the Niagara No Frost system.

The evaporative condenser consists of two circuits of 18.7 tons capacity for the quick freezing room and 5.1 tons capacity for the storage room. Air inlet and outlet ducts are provided for the circulation of outside air. The condenser is equipped with fan and circulating pump, and with automatic by-pass dampers for recirculation.

The concentrator includes a spray pump, filter box, heating coil, and fan with moisture removal capacity of 15 g.p.h. The sump tank for the spray solution measures 30 by 36 by 36 in. Supply pump and feed pump operate in conjunction with the concentrator. A heat exchanger controls the temperature of the spray solution.

Space is also provided in the compressor room for additional stages of compression, for increased freezing capacity, and for use in conjunction with a future storage room.

The requirements for space heating and other steam requirements in the refrigerated plant are handled by a gas-fired boiler rated at 280,000 B.t.u./hr. The steam requirements consist of a unit heater for the office and another for the compressor room, both on the thermostat control; a radiator for the wash room; a heat exchanger for heating the oil for the underfloor pipe grid in the packing room with thermostatic valve control; and a steam coil for the concentrator with solenoid valve control.

Refrigeration equipment and controls were supplied by Carrier Corp. and the freezer boxes were supplied by Freezer Box Div., Annapolis Yacht Yard, Inc.

Consulting engineer was V. C. Patterson & Associates of York, Pa. Mechanical engineer, including all heating, plumbing, and general contracting, was Hauxwell & Smith of Port Chester. Electrical contracting was done by Field Electric Co., also of Port Chester.

Frank Porter Transferred

CLEVELAND — Frank Porter, formerly merchandising specialist for the Cincinnati branch of Carrier Corp., has been transferred to the Cleveland district where he will perform the same services at the district level. Porter said that his transfer became effective Sept. 1.

In the Laboratory

Salt Can Be Removed from Sea Water by Freezing; Can It Be Done Commercially?

SEATTLE — Removal of salt from sea water by freezing, which can be done in the laboratory, offers a challenge to the refrigeration engineer in terms of developing a practical method of doing this on a commercial scale, believe Thomas G. Thompson and Kurt H. Nelson of the Department of Oceanography, University of Washington.

"According to calculations, approximately six times as much energy is required for distilling sea water as is needed to freeze it," Thompson told the American Society of Refrigerating Engineers at its 41st semiannual meeting here.

Another disadvantage of the distillation process, he explained, is that "hot sea water and hot brines are exceedingly corrosive. Furthermore, upon heating, calcium and magnesium carbonate tend to precipitate, and as the sea water is concentrated, calcium sulphate likewise forms. Thus, to prevent incrustation by these salts, the hot brine must be discarded after 30% of water has been removed."

Yet, he pointed out, "the use of sea ice as a source of fresh water has been known to the inhabitants of the Artic regions since prehistoric times. Vessels plying Arctic water in the summer months have often watered ship from ponds formed in ice floes by melting ice."

Interest in obtaining fresh water from salt water is not limited to ocean-going vessels, Thompson indicated.

"There are many regions of the world faced with the problem of an inadequate or improper supply of fresh water, and yet from these very regions one may gaze upon a vast expanse of ocean," he said.

"Several years ago Congress appropriated a considerable sum of money for the purpose of studying the recovery of fresh water from saline waters. A special office, the Saline Water Conversion Program, has been established under the Secretary of the Department of the Interior."

Laboratory experiments conducted by Thompson and Nelson included freezing of cylinders of sea water taken near the entrance of Puget Sound, after which the cylinders of ice were sliced into thin discs to study ice distribution.

These and other experiments showed that a somewhat better percentage of fresh water than the 30% obtained by distillation could be recovered by freezing, but the latter method theoretically requires only one-sixth the energy needed for distillation.

W. A. SHARRITTS M. L. TRIPLETT

Sharritts, Triplett Take Acme Production Posts

JACKSON, Mich.—K. A. Weatherwax, president of Acme Industries, Inc., has announced the appointment of Walter A. Sharritts as manufacturing manager and M. L. Triplett as factory manager.

Sharritts and Triplett have worked together more than 25 years in two divisions of General Motors Corp. and for Carrier Corp.

Sharritts spent 29 years in production and material control and in production management work for the Delco, Delco-Remy, Frigidaire, and Eastern Aircraft divisions of General Motors. For nine years, he was production control manager and productive manager of several departments at Carrier.

Triplett had more than 16 years of experience with General Motors. He was with Carrier for nine years in production work.

Announcing
PARAGON'S
NEW 3700 SERIES
WINDOW
AIR CONDITIONER
SWITCH

PROFITABLE "early bird" that saves on business and professional office systems — to 1-ton capacity

Inner dial set for ON operation any hour. Once set, the same setting prevails each day without resetting. Dial adjustable in 15-minute increments.

Dial trippers on outer *dial* may be varied to shut OFF unit at a different hour each day or set to eliminate Sundays and holidays.

Easy to set . . . provides regular daily settings and irregular weekly operation, including Sunday and holiday cutouts

The Paragon 3700 Series timer can be set to "get to the office early" and turn ON window air conditioners *before* business hours. Even "stays late" to turn them OFF after closing hours.

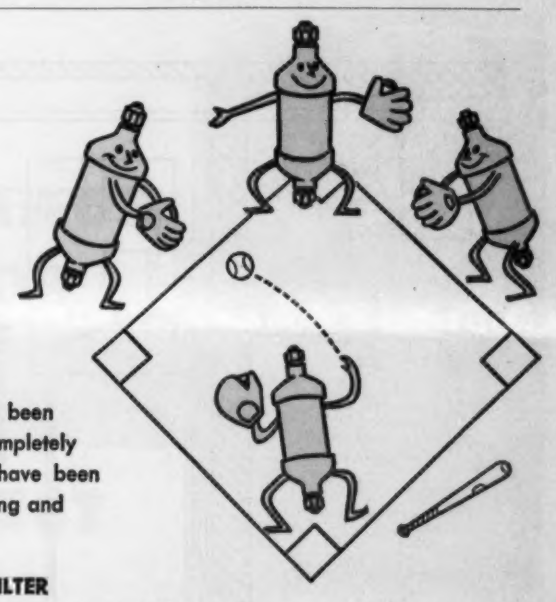
The complete convenience and flexibility of the 3700 Series timer ends unnecessary air-conditioner operation . . . saves money week-ends and holidays. Switch may be manually operated at any time without disturbing sequence of automatic operation. A sales clincher for *any* window air conditioner! Write for Bulletin 5470, Dept. 1687.

Also write for complete facts on these famous Paragon timers

PARAGON ELECTRIC COMPANY
TWO RIVERS, WISCONSIN WORLD'S FOREMOST MANUFACTURER OF TIME CONTROLS

MUELLER BRASS CO.

deluxe drier . . . the one that covers all bases



1st **THE ONE PROVED BY 3,000,000 IN SERVICE**
Three million Mueller Brass Co. Deluxe Driers have been installed in commercial refrigeration systems. The completely satisfactory service they have given wherever they have been used is certain proof of the thoroughly effective cleaning and drying job they do.

2nd **THE ONE WITH THE EXCLUSIVE CONE SCREEN FILTER**
The cone screen filter of Mueller Brass Co. Deluxe Driers is a patented filter-strainer unit filled with chemically cleaned pure wool. And the filter area has been increased 30%, providing a cleaning capacity approximately seven times that of the usual disc.

3rd **THE ONE THAT REALLY REMOVES MOISTURE AND ACIDS . . . *AND ALWAYS HAS!*** PA 400 Super Silica Gel, a new, more effective desiccant in Mueller Brass Co. Deluxe Driers, provides up to 98% more drying capacity. In addition, PA 400 not only removes moisture that may cause formation of acids in a system but also removes these acids if they are already present prior to the installation of the drier.

HOME **THE HOME OF MUELLER BRASS CO. DELUXE DRIERS . . .** the large, modern plant in Port Huron, Michigan. Mueller Brass Co. was one of the pioneers in the development of reliable refrigeration and air conditioning equipment. Complete laboratory, research and manufacturing facilities insure the production of valves, driers, fittings and copper tube bends and coils to the highest standards of quality.

Write today for big, new Streamline Refrigeration Products Catalog . . . just released!

Driers and Filters | Wrot Copper Fittings and Copper Tube | Flare Fittings | Liquid Indicators | Valves

MUELLER BRASS CO. PORT HURON 9, MICHIGAN 126

Trade Mark registered U. S. Patent Office; Est. 1926.

F. M. COCKRELL, *Founder*

'The Conscience of the Industry'

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SEPTEMBER 13, 1954

How To Enlarge Your Profits By Advertising Smartly

Why should a business enterprise advertise when its sales are down?

That question may seem to be odd at this point. Business conditions are improving steadily, and confidence in our future is burgeoning.

Even in "good times" such as these, though, some individual businesses suffer losses. Often, in those circumstances, Bosses cut down advertising and sales expenditures.

There are many good reasons why that action is the reverse of common sense. We give:

(1) Advertising preserves brand names, and enhances the reputation of business integrity.

(2) If a corporation fails to advertise regularly, buyers may shift their allegiance to competing firms which *do*.

(3) Every month a steadily enlarging new generation of buyers needs to be told about new and old products which they can and should buy (or sell, if they're retailers).

(4) When the "public" is allowed to forget a real good product—through advertising neglect—years may be required to reestablish it. (And too much money.)

To bolster these theorems, please allow us to point out that World War II—when normal buying habits were interrupted—provided a laboratory for the testing of arguments for and against advertising products which were unobtainable, or which weren't desired.

Advertising did a real good job even then. A celebrated instance: Car and truck makers kept pounding away in public prints even though they had little or nothing to sell. When automotive vehicles again were available, auto and truck sales were "out of this world." A huge reason, we believe, is that their manufacturers continued to advertise in those years *for the future.*

Reverse side of the coin: quite a few corporations reduced their advertising—when the need wasn't apparent. Later they regretted this parsimony.

At least two dozen cozy manufacturers of nationally known items suddenly had to cope with competitors who filled the advertising vacuum they had allowed by their own neglectfulness.

Too quickly for comfort each of these new company's sales ranked second, third, or fourth in a closely competitive field. Why? *Dominant Advertising.*

We are a mass-production nation, and mass production cannot be achieved without those huge markets which advertising helps to create. In good times or bad, advertising is absolutely essential to our economy.

Old P. T. Barnum—whom some have called the first great advertising genius—delivered *solid gold advice* for businessmen in this *bon mot:*

"Advertise, or the sheriff will do it for you."

They'll Do It Every Time . . . . . Jimmy Hatlo

SO THAT'S THE NEW PERKOL SPORT JOB, EH, CHIEF? IT'S A HONEY!! WOW-EE!! GUESS THAT SET YOU BACK TEN GRAND OR SO, WHAT?
THE FRONT OFFICE RIDES AROUND IN A SPACE SHIP— AND WE'RE STILL USING THIS KEYSTONE-COPS PATROL WAGON···
HE RUNS THE FIRM WITH HIS PINKY, TOO— HIS HEAD IS JUST TO LET HIM KNOW HE HAD A BIG TIME THE NIGHT BEFORE··
I LIKE OUR SLOGAN, "THE BEVERAGE OF TOMORROW"— OUR TRUCKS WILL GET THERE NEXT WEEK···WE HOPE···
IT'S THE POWER STEERING IN HEAVY TRAFFIC I LIKE··HEH-HEH··· CAN TURN A FIGURE 8 ON A DIME, JUST USING MY PINKY···
IF WE KEEP LOSING BUSINESS ON ACCOUNT OF LATE DELIVERIES, BIGDOME WILL BE SELLING HOT DOGS OUTA THAT HEAP··
BILGEWATER BEVERAGE Co.
WHERE'S THE EFFICIENCY MAN NOW?
THANX AND A TIP OF THE HATLO HAT TO GEORGE SIEVERS, 6078 MANCHESTER DRIVE, OAKLAND 18, CALIF.
7-12
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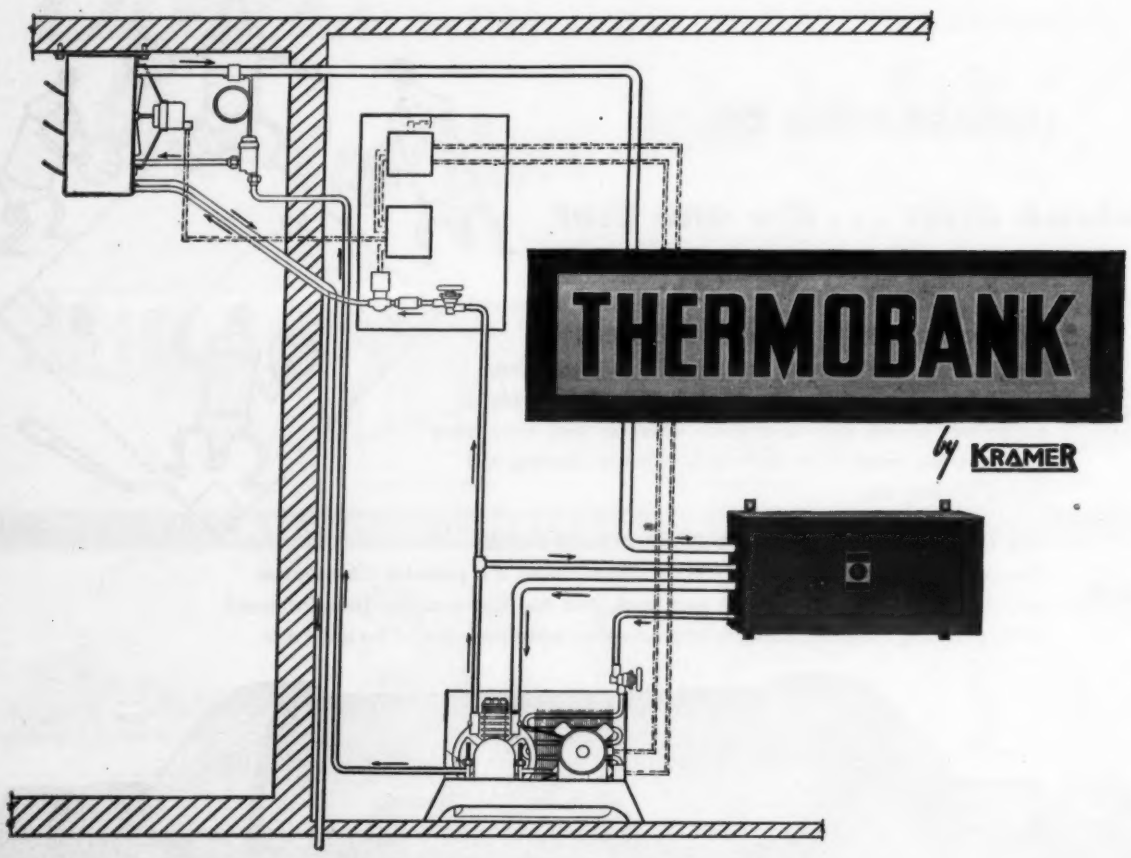


Look at the record before you buy any defrost system

For eight years THERMOBANK has been the unquestioned standard for low temperature automatic defrosting. Significant improvements over the years have made THERMOBANK even better.

If you look at the record of thousands of successful installations, you, too, will join the leading refrigeration experts specifying Kramer THERMOBANK.

WRITE FOR BULLETIN R-124

KRAMER TRENTON CO. • Trenton 5, N.J.

Servel, Inc.
Evansville, Ind.

Editor:

Just to prove that I read your excellent publication AIR CONDITIONING & REFRIGERATION NEWS thoroughly from cover to cover (including "Inside Dope" in which you hit the jackpot most every time), I am passing on the following comment with regards to an article in the July 19 issue headed "Ad Stresses B.T.U. Rating, Not Hp., In Room Coolers."

In this article, second paragraph, it is stated ". . . Don't be misled. Demand to see the certified B.t.u. Cooling Capacity of the brand you buy." Further along in the item is, and I quote, "Certified ratings are based on ASRE conditions, the ad explained."

If you will refer to ASRE Standard 16-53, page 5, paragraph 3.5 published ratings, you will see that any ratings that are published must conform to the 16-53 standard and shall be identified as follows: "Ratings based on tests conducted in accordance with ASRE standard methods of rating and testing air conditioners, standard 16-53. It is requested that the term 'ASRE' or 'ASRE Standard Conditions' not be used in connection with published ratings unless such ratings shall have been determined in accordance with this standard."

My purpose in calling this to your attention is to point out that ASRE does not wish to have published ratings based, as the article states, ". . . on ASRE conditions." I realize that this is something that has been done quite generally and promiscuously in the past but it is my firm conviction that we all should do everything possible to discourage the publication of such references as contained in this one.

I do not know whether or not the particular ratings that were the subject of this article were obtained by using test equipment as outlined in section 5 of the ASRE Standard 16-53. The sanctioned equipment would be, of course, a room type calorimeter.

I know that you will realize that my only intent in writing this letter was to point out the correct use of the rating data, when reference is made to the ASRE.

Maybe next time I can send you a good joke—at least I'll try.

JOHN H. JENNINGS

Brooklyn, N. Y.

Editor:

If you would publish the following article I would greatly appreciate it—gratis—of course.

PERHAPS I AM WRONG
by Albert J. Boam

There are so many men of such great capabilities and yet how few of them take any interest (active interest) in their own *Air Conditioning and Refrigeration News!"*

They seem so busy trying to make a dollar in their own individual companies that they haven't the time or the bigness of heart to write some of their valuable thoughts—through the NEWS—to the men of the industry—their own industry.

Possibly they need to be aroused and quickened to the extent of good they can do by helping others get the right answers in air industry and science that is not exactly a sinecure.

Business secrets are all well and good but if one goes to the grave with them—they do not do anyone any good.

You may borrow of the Public Library many good books on air conditioning, refrigeration, material handling—are you taking advantage of it?

We say we like our industry and work yet how many of us practice what we profess—perhaps I am wrong and just talking through my hat.

ALBERT J. BOAM

Current Literature

To obtain further information on the literature listed below, please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

Testing and Rating Code For Boiler-Burner Units

——KEY NO. P-920——

NEW YORK CITY—The Heating, Piping and Air Conditioning Contractors National Association announces the publication of a new eight-page "Testing and Rating Code for Boiler-Burner Units" developed by its boiler output committee.

The new code is the result of work started about three years ago. It is a performance code. Wide and complete latitude is given to all manufacturers and designers. Safe limits are established for maximum operating conditions and "Net Load Rating" determined by use of a factor for piping, pickup, and possible overload.

Any architect, consulting engineer, building commissioner, air pollution authority, Federal authority, heating contractor, or interested member of the industry may obtain one complimentary copy.

Such request should be made on the company letterhead and sent to the Heating, Piping and Air Conditioning Contractors National Association, Suite 1843, 30 Rockefeller Plaza, New York 20, N. Y., attention of L. B. Gruman, Jr., secretary. Additional copies can be purchased at $1 per copy.

Questions and comments may be addressed direct to George P. Nachman, chairman of the boiler output committee, 1775 E. 45th St., Cleveland 3.

Catalog Tells How Cooling Towers Conserve Water

——KEY NO. P-921——

JACKSON, Mich.—The question, "How do cooling towers save you money?" is answered fully in a new catalog on "Acme Flow-Cold" cooling towers, recently published by Acme Industries, Inc.

Gist of the answer is that cooling towers cool the water ordinarily discharged from refrigeration and air conditioning systems and allow it to be used over and over again—with over 95% less water consumption and important savings in water costs made possible. Where sewage rates are high, additional savings are gained.

Five models of Acme cooling towers are illustrated and described in the new catalog, with capacities ranging from 3 through 15 tons. Advantages of their heavy-duty, all-metal galvanized construction are detailed and complete dimensions given.

A simple selection procedure is given also.

Evans Publishes Brochure On All-Aluminum Air Filters

——KEY NO. P-922——

MOLINE, Ill.—A four-page brochure on Evans all-aluminum air filters has recently been published by the George Evans Corp. here.

The folder gives specifications of the filters, illustrates them, and contains charts indicating their dust-holding capacity.

Booklet Lists 25 Ideas To Help Make More Sales

——KEY NO. P-923——

ROCHESTER, N. Y.—A four-page booklet, listing 25 "ideas to help make more sales," has been developed by Kelly-Read & Co., personnel development specialists.

Copies of the booklet are offered at no cost to companies for distribution to their salesmen, "to encourage quality selling among sales personnel."

For the person who shies away from the many-paged books on the art of selling, the booklet covers such points as: planning your work time, the importance of the first minute with the customer, making yourself understood, asking for the order, keeping promises, and the need to believe in what you're selling.

Kelly-Read & Co. regularly publishes *SALESense*, bi-weekly bulletin of sales information.

Hotpoint Issues Mat Advertising Supplement

——KEY NO. P-924——

CHICAGO — Hotpoint Co. has supplied to all its dealers its new mat advertising supplement, featuring a variety of advertising and merchandising ideas that dealers can use in the coming months.

The new mat book features newspaper mats, radio announcements from 20 to 60 seconds, TV film spots, theater films, outdoor advertising signs and suggestions, product illustrations, etc.

According to company officials, the new mat book brings dealers up to date information and advertising services not previously used. Hotpoint has utilized this mat service booklet to act as a dealer's personal advertising agency.

News Sheet Describes Copper Welding Alloys

——KEY NO. P-925——

FLUSHING, N. Y.—A four-page illustrated news sheet of Eutectic's newly developed copper and copper base welding alloys has been issued by the Eutectic Welding Alloys Corp. here.

Five new alloys, each with distinctive properties and designed for a specific purpose, are listed in the sheet, which is labeled Vol. 1 No. 11 TIS 2263.

The alloys include "EutecTrode" 280 DC, an arc electrode with unusual weldability, high tensile strength, and corrosion resistance on copper and copper alloys. It may be used for joining ferrous metals and copper alloys.

EutecTrode 300 DC deposits practically pure copper and may be used without preheating the base metal. EutecTrode 1850 AC and 1850 DC eliminate lengthy preheating and use less heat input. Eutectrode 1840 DC was developed for weldments which require maximum machinability. "EutecCopWeld" is a copper solder in paste form for close fitting, high strength joints.

Chase Supply Issues Refrigeration Catalog

——KEY NO. P-926——

CHICAGO — The Refrigeration Div. of Chase Supply Co. here has issued a new catalog covering its line of refrigeration and air conditioning equipment, tools, and supplies.

The 120-page catalog, compiled by William Schaller Co., Inc., Hartford, Conn., is standard 8½ in. by 11 in. size. It contains illustrations and all specifications necessary for ordering by mail, and is cross-indexed for ready reference.

Helpful engineering data is included, and a separate price supplement accompanies the new catalog.

The Chase Co. has announced that its heating supply catalog will be available about Nov. 1.

MMM Brochure Describes 'Vapo-Wall' Pipe Insulation

——KEY NO. P-927——

HOUSTON, Texas—MMM, Inc. here has issued a new four-page brochure on its low-temperature pipe insulation, "Vapo-Wall."

This illustrated folder provides a complete picture of Vapo-Wall's insulating properties, as well as recommendations on how to order and apply this pipe covering.

These booklets are available on request and are accompanied by price charts, detailed specification sheets, and other data.

UsAirco Technical Booklet On A. C. Written In French

——KEY NO. P-928——

MINNEAPOLIS — A 15-page, illustrated booklet in French, providing technical data on air conditioning load determination and system design has been issued by the export department of United States Air Conditioning Corp.

A precise method of load calculation and a simplified method are presented and sample cases of each are provided. A calculation sheet for use in computations is also furnished.

Other information includes instructions on choice, size, and placement of ducts and grilles, location of equipment and return air handling, and a variety of charts, diagrams, and graphs for use in these determinations.

Weber Catalog Describes Glass Machinery Equipment

——KEY NO. P-929——

LOS ANGELES—A new catalog describing the complete line of glass machinery equipment manufactured by Weber Showcase & Fixture Co., Inc., manufacturer of store fixtures and commercial refrigeration equipment, has been announced by Edward H. Cherniss, manager of the machinery division.

Weber Showcase is reportedly the oldest manufacturer of a complete line of glass processing equipment.

Bohn Picture Report Shows How Products Are Made

——KEY NO. P-9210——

DETROIT — A newly-published booklet, "Bohn Products and How They Are Made," which takes the form of a photographic tour of the research and manufacturing divisions of Bohn Aluminum & Brass Corp., is available upon request.

Typical sections of the 28-page, two-color booklet highlight metallurgical research and development, production quality control, manufacturing methods, and assembly operations in each of the nine Bohn divisions.

Chart Shows New Symbols For Wrought Aluminum

——KEY NO. P-9211——

OAKLAND, Calif. — A handy wall chart showing the new designation system for wrought aluminum and wrought aluminum alloys has been prepared by Kaiser Aluminum & Chemical Sales, Inc., and is now available.

The new four-digit system, developed by the Aluminum Association, becomes effective Oct. 1, 1954.

The Kaiser Aluminum conversion guide indicates old and new designations in bold type and has been designed as a permanent reference.

It may be obtained from Kaiser Aluminum & Chemical Sales, Inc., Industrial Div., or from any Kaiser Aluminum sales office.

Here's Harry Alter's DEPENDABOOK No. 161 — 1954

REFRIGERATION PARTS and Supplies plus

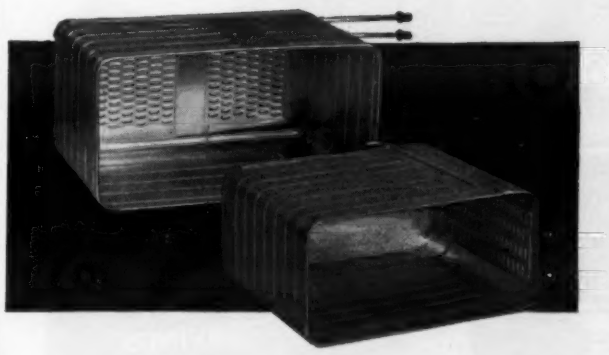
Electric-Motor Parts, Air Conditioning and Heating

There are over 9,000 items illustrated, described and rock-bottom-priced in our newest DEPENDABOOK. So—get and use this money-saver! Write for your copy to

The HARRY ALTER CO., Inc.
1728 S. Michigan Ave., Chicago 16, Ill.
134 Lafayette St., New York 13, N. Y.

Wholesale Only
"Harry Alter gives you snappy service"

NOW! EVAPORATORS MADE FROM REYNOLDS ROLL BONDED ALUMINUM SHEET



Reynolds *ROLL BONDING* Offers Substantial Savings in Materials, Parts and Assembly Time

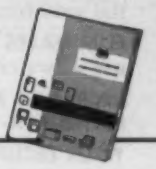
Roll bonded aluminum sheet is two sheets of aluminum metallurgically bonded together. There is no brazing and no flux contamination. This Reynolds method of providing aluminum sheet with integral liquid passages offers you many advantages. For example, metal ordinarily used for tubing, accumulators and receivers is eliminated because the passageways are inside the sheet. Also—there are no tubes to bend, welding is minimized and many connecting and assembly operations are completely eliminated.

With evaporators of this new Reynolds roll bonded aluminum sheet there is no problem of lost conductivity. You can route refrigerants how and where they are needed in the unit. Problems inherent with tubing such as bending, radius, expansion and others are eliminated.

Reynolds roll bonding is strong and compact. Passageways may be flat or oval rather than round if desired. They also can be smaller and placed closer together since additional length does not add to the cost. The passageways themselves act as stiffening ribs and contribute to the overall sturdiness of the unit.

For complete details on evaporators made from Reynolds roll bonded aluminum sheet or for Reynolds engineering assistance on other refrigeration and air conditioning parts, contact the Reynolds office under "Aluminum" in your classified telephone directory. Or, write Reynolds Aluminum Fabricating Service, 2053 South Ninth Street, Louisville 1, Kentucky.

FREE:
Write for your copy of "Aluminum Appliance Parts"—20 page brochure that describes the services offered by Reynolds Aluminum Fabricating Service to the appliance industry.



See "Mister Peepers", starring Wally Cox, Sundays on NBC-TV.

REYNOLDS ALUMINUM

BLANKING • EMBOSSING • STAMPING • DRAWING • RIVETING • FORMING • ROLL SHAPING • TUBE BENDING • WELDING • BRAZING • FINISHING

Wholesale Salesmen—How They Work Best

Hotpoint's 'Shirtsleeve' Conferences Dig Out Procedures for the Best Possible Job for Both the Distributor and His Customer

Conducted in a unique manner, a series of distributor salesmen's "shirtsleeve" workshop conferences were held in key cities throughout the U. S. in the latter part of August.

Purpose of the workshop conferences was to help distributor personnel to become better equipped to do their jobs, and to exchange ideas. They were also confronted with examples of current problems facing their retail accounts, and were required to work out (on paper) possible solutions. Hotpoint officials were on hand to guide the conferences, but the actual discussions with resulting suggestions for better practices were carried out by the distributor salesmen.

One of the editors of AIR CONDITIONING & REFRIGERATION NEWS was invited to attend one of the workshop conferences, and has prepared a series of articles which will bring out some of the suggested "improved" practices, together with some of the proposed methods of solving existing problems found at the retail level.

"DOWN-TO-EARTH" PROBLEMS WERE ATTACKED in the Hotpoint "shirtsleeve" conferences aimed at helping the wholesale salesman to do a better job. Lynn Wood, one of Hotpoint's merchandise managers, goes over some of the material with (l. to r. around table) W. C. Wolfensperger, GESCO, Rockford, Ill.; Harlowe Kelley, GESCO, South Bend, Ind.; Nelson E. Murphy, GESCO, Chicago; Leslie Eichler, GESCO, Milwaukee; Bob Kaliher, Graybar, Minneapolis; Keith Holvenstot, Rock Smith Co., Davenport, Iowa.

CHICAGO — Distributor salesmen attending one of Hotpoint's workshop conferences here readily agreed that the main purpose of any call on an account is to "Insure that something happens after you leave."

By the time that the conference was over most of them were probably ready to agree that in order to insure that "something happens" after they leave, it is important that they analyze and study ways of improving their own method of operation, and that they also keep up on industry trends and problems through trade publications and other sources.

They found out that in general their work falls into three main categories: (1) development of the territory, (2) development of the dealer accounts, and (3) management of the territory.

First step in the matter of territory development is to make a continuing analysis of the territory, working with the sales manager to determine when and where new accounts are needed.

It is up to the distributor salesmen to make the careful selection of dealers to be franchised, and where to look and how to look for such accounts, and what to look for in the individual accounts. Ability and credit standing are the two main "musts" that have to be found in a potential account.

Setting Up the Account

In the actual setting up of new accounts, the first step is "preparation." The salesman should develop the franchising presentation for the particular account, and try to arrange to have the presentation meeting held at the distributor's headquarters.

In addition to bringing out all the advantages of handling the firm's lines, the distributor salesman, in the actual franchise presentation, should explain such things as discount policy and terms and extent of credit, cooperative advertising and promotion programs, the type of service available on the product, and something about the distributor organization including names and titles of distributor personnel with whom the dealer might have contact.

The salesman should secure the opening order and explain re-order procedure, and also outline a recommended order for merchandising materials.

In the follow-up on the new customer it is recommended that the distributor salesman be on hand when the first products are delivered. He can assist the dealer with his announcement program, help train sales personnel on the new line, set up continual cooperative advertising plans, organize promotional program, and provide whatever special assistance is needed for the first 90 days.

Development of Accounts

For the general development of dealer accounts, over-all or "continuous" objectives include a continual analysis of dealer performance and correction of any weaknesses found, the devising of promotional activities to push sales of slow moving items, promotion of incentive competition within the dealership and within the territory, and keeping the dealer informed on correct pricing, merchandising activities, trends, and competitive activities.

It is up to the distributor salesman to insure that every product in his line is delivered, installed, demonstrated, and serviced effectively, and to make certain that all store personnel know how to operate and maintain the products. He must also keep the proprietor enthusiastic about the value of service as a sales function.

Daily call procedure by the distributor salesman involves a certain amount of preparation in the form of reviewing dealer activity before each call, and determining specific objectives for each call. This latter includes such matters of current promotions, encouraging balanced sales performance, and working to correct management weaknesses.

The salesmen should carry all selling materials needed. At the dealer's place of business he may find it wise to check the stock.

What's Done on a Call

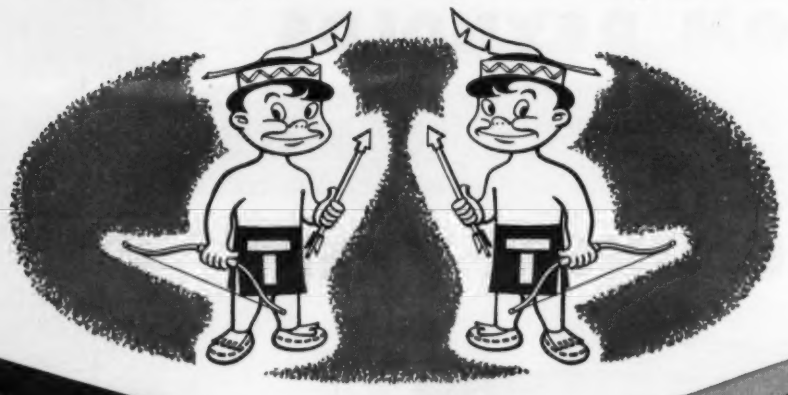
In his discussions with the dealer on a call the distributor salesman handles complaints, questions,

(Concluded on next page)

FOR LARGER AIR COOLED APPLICATIONS

A BRAND NEW

TECUMSEH TWIN



IDEAL FOR FURNACE UNITS

BEST FOR LARGE ROOM COOLERS

GREATER CAPACITY

IMPORTANT COST SAVINGS

TECUMSEH'S NEW 1½ H. P. AIR COOLED COMPRESSOR

HAS SAME COMPACT BASIC DESIGN as the 1 h.p. model, and is adaptable to most cabinets. It is slightly higher, but the width and mounting dimensions are the same. Start and run capacitors are bulkhead mounted, remote from the compressor.

CUTS COST ON FURNACE APPLICATIONS. Air cooling requires no water or drain connections. Faster, easier installations. Especially adaptable for less expensive applications in year-round systems.

BROADENS YEAR-ROUND MARKET. Designed into a system, this new compressor will help broaden the year-round market by providing more economical central cooling for low-cost housing.

ELIMINATES WATER SHORTAGE PROBLEM. Fully air cooled. Delivers rated output without the use of water.

INCREASES ROOM COOLER MARKET. Gives the designer an economical compressor for large room coolers. Fits either console or window type.

YOUR TECUMSEH REPRESENTATIVE is ready to show you how this Model B32P16 will help you meet design, engineering and cost problems on 1½ h.p. applications. Write today for his name and address.

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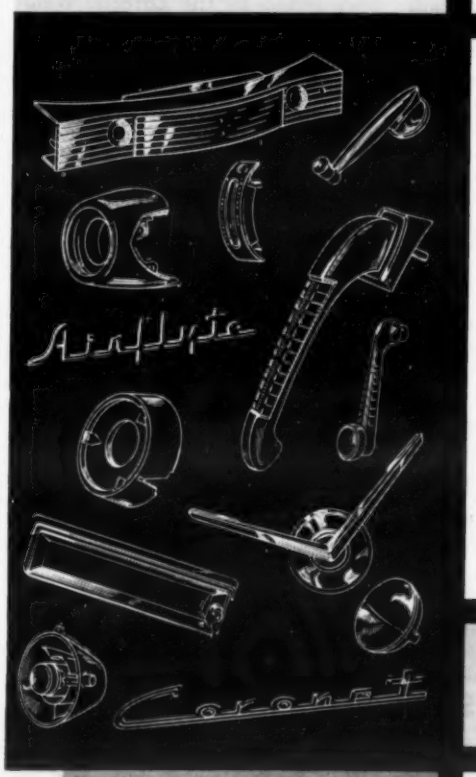
When Quality is a Must in Finished Die Castings

B G R C



America's great industries demand *quality, quantity* and *fast delivery* of finished die castings. That's why more than a score of leading manufacturers in the refrigeration, automotive, radio-television, appliance and plumbing fields rely on Grand Rapids Brass Company.

Two Grand Rapids Brass Company plants now produce more than 17,000,000 plated, finished die castings *each month.*

If you require quality castings electroplated or baked synthetic lacquer finished delivered in large quantities *on schedule,* Grand Rapids Brass Company's design engineers and more than 1,000 skilled employees will prove of invaluable help.

● *Write for complete details on the production capabilities of one of the largest die casting-finishing plants in the nation.*

Grand Rapids Brass Company

Grand Rapids, Michigan

Division of Crampton Manufacturing Company

Suppliers to the Nation's Leading Automotive, Refrigeration and Plumbing Manufacturers

The Wholesale Salesman--

(Concluded from preceding page)

and objections, and brings the account up to date on product movement in relation to quotas and to potential. He also "sells" current assignments and promotions.

Further along this line he checks and assists on promotions in progress, provides service on merchandising materials or displays, and works with dealer salesmen to improve product demonstrations.

Territory Management

Basic factor in "territory management" for the distributor salesman is the scheduling of his activities for the best use of his time. The territory should be analyzed in terms of establishing frequency of call for all accounts, based on account classification. The time to be devoted to each account should be apportioned in terms of the potential volume.

A routing pattern should be established to achieve maximum coverage with a minimum of callbacks. The salesman should establish progressive objectives for each account to secure continuing development.

Making Best Use of Time

To make the best possible use of his time, the distributor salesman should carefully plan his calls and promotion. He should make it a point to perform non-selling tasks during non-selling hours.

In the realm of territory management the distributor salesman should be sure that he is cooperating fully with the objectives of the distributorship, that he is applying company policies, principles, and procedures in his everyday operations. He should work with his own sales manager in establishing dealer performance and quota records, and should submit accurate reports, on time.

To help the distributorship management to direct field efforts effectively, the salesman should keep the sales manager informed of territorial trends product-wise, and keep the sales manager posted on dealer attitudes.

He should keep the sales promotion manager informed of competitive promotions and should contribute ideas and news about dealer promotions among his own customers.

It is essential that the salesman maintain his own personal development, which in addition to keeping up his own personal appearance as well as that of his car, also means keeping informed on industry trends and product knowledge, and being on the lookout for new sales and merchandising ideas that he can adapt to his own dealers' operations.

Number of Calls Per Day

In the conference in the Chicago area, the following was developed as an average, from questioning those present, of the number of calls made per day, and a general rundown on how the distributor salesman spends his time. Following are the averages:

	Metropolitan Accounts	Rural Accounts
No. of calls per day.....	5	3
Travel time between calls.	18	60
Time per call spent in waiting	20	20
Time per call spent in selling product	36	30
Time per call spent in selling promotions	21	15
Time per call spent in checking dealer inventory	10	5
Time per call spent with retail salesmen	28	15
Time per call spent working on retail floor	10	15

The comment was made that one more call per day results in 250 calls per day, and that if an average $100 per extra call resulted, this would mean $25,000 additional volume per year.

Suggestions were also offered on how to eliminate waste time and "stretch" the day, so that the "call-per-day" average could be boosted.

Using Time Efficiently

Among the things suggested for making each call more efficiently were to plan the presentation in advance; make appointments for calls; make calls at the best time of the day (for the dealer); be prepared with material and ideas for the dealer; be businesslike.

To eliminate waste time, salesmen shouldn't take two-hour lunches, and they should avoid long coffee-breaks, and keep their telephone time to a minimum. To stretch the day, they should try to work in a call earlier in the day or later in the evening, and call on dealers when they're open nights.

For the "franchising contact" in getting new accounts to handle the line, it was suggested that if possible, the prospective new account be brought to the distributor's place of business, so that he can meet the sales manager and the credit manager, and find out that the latter is "almost human." It also gives the dealer a chance to see all the merchandise.

In the approach to new accounts, it was suggested that if an account has been worked on for some time without much success, it may be worthwhile to get a "new face" in to see the prospect.

When To Set Up Accounts

Is there a good time for trying to set up new accounts? Yes, when new lines are being introduced, or when the prospect is starting out on his new business year.

In the actual selling of an account, it was suggested that salesmen too often neglect doing many obvious things, such as bringing out all the advantages in the particular line or in working with the distributorship, and revealing a list of other dealers who are selling the line successfully.

NEW PRODUCTS?

Turn to "What's New" Page for useful information on new products. Use Key No. for fastest service.

Philadelphia Distributors Adds Norge Appliances

PHILADELPHIA—Appointment of Philadelphia Distributors here as Norge distributor in Bucks, Chester, Montgomery, Delaware, and Philadelphia counties in Pennsylvania, was announced recently by the Norge Div. of Borg-Warner Corp.

The firm will also serve all of Delaware and Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Ocean, and Salem counties in New Jersey.

Officers of the firm are A. E. Hughes, president; R. B. Barnes, sales manager; H. M. Ostien, credit manager; Albert Bloom, sales promotion manager; and Russ Mauger, service manager.

Dealers Offered 'Specials' On Deepfreeze Refrigerators

N. CHICAGO, Ill. — During a current "dealer roundup" to multiply and strengthen Deepfreeze retail outlets for refrigerators, the full line of Deepfreeze refrigerators is being offered under terms that permit a greater than normal markup for dealers, the company has announced.

For the five-week campaign, which will end Sept. 25, special promotional allowances will be made to distributors on carload orders, providing the increased margins for newly-franchised dealers and for dealers who step up their selling activity, according to J. A. Rishel, Jr., general sales manager of Deepfreeze Appliance Div., Motor Products Corp.

The latest Deepfreeze drive will concentrate on franchising small town dealers, who "sell their products with pride and service," Rishel explained. These independent dealers, he added, will have the assurance that the Deepfreeze line will not be handled by "their neighbor across the street."

The Deepfreeze refrigerator line comprises five models, ranging from 11-cu. ft. unit with "Aqua-Tap" chilled drink dispenser on the door and a swing-out meat compartment to a lowest-priced unit of 9.6-cu. ft. capacity which has a 50-lb. frozen food compartment, half-bushel crisper, and door shelves.

Select Servel 'Wonderbar' For Milan Design Display

EVANSVILLE, Ind.—The Servel electric "Wonderbar," silent portable refrigerette, will be featured in the United States exhibit of industrial design at the 10th Triennale Fair in Milan, Italy, from Aug. 25 to Nov. 15, according to word received by Donald Dailey, vice president in charge of product planning for Servel, Inc.

The American exhibit for the Milan fair has been assembled by the Society of Industrial Designers. It will show Europeans 50 of the best examples of a wide variety of modern, mass-produced American products.

"These products, in which professional product design has been coupled with America's genius for mass production, show why the American people have their present world-high standard of living," Robert H. Hose, president of the Society of Industrial Designers, wrote to Dailey.

Dailey designed the Wonderbar refrigerette, which is styled like fine furniture for use in any room in the home or in an office.

More Room for Used Boxes

LOS ANGELES — One of the largest used refrigerator sales centers in Los Angeles is claimed by Pico Refrigeration Co. here, which purchased and remodeled a building at 3620 W. Pico Blvd.

Refrigeration Fundamentals

Newest Master Service Manual

Latest vital information for every beginner in refrigeration. Gives the expert a handy, pocket-size reference on important facts. Seventy-eight illustrations, 17 tables in this 112-page book give you the facts quickly and easily.

Chapters on Theory, Principles, Properties of Refrigerants, Refrigerant Cylinders, and many others. Indexed for easy reference.

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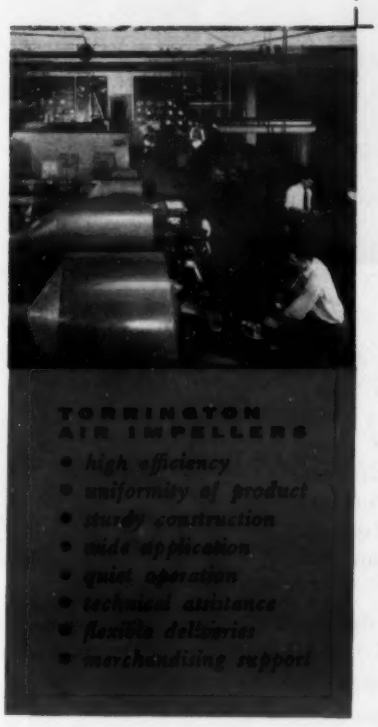
CASE HISTORY NO. 2

The incident of the VIBRATING fan blade



Another air-moving problem solved at AIR CENTER, U.S.A.

One of our customers called us recently with a major problem. His new unit was operating at an objectionable noise level, with extreme vibration, even though no one component was operating beyond its design limit. Torrington engineers quickly went to work and found that the cause of the problem was *resonance*. They discovered that both the motor and the fan blade were vibrating at closely coincident frequencies, each augmenting the other. The combined vibration was actually strong enough to fracture the fan blade in some instances — and it certainly shortened the life expectancy of the unit. Torrington engineers promptly recommended a change in the air impeller specifications. This simple alteration gave the fan blade a different mass, and therefore a different frequency of vibration. Resonance was eliminated, the sound level was reduced, and the customer was able to market a far more satisfactory unit at no extra expense. Torrington has acquired a wealth of experience dealing with problems of air flow, sound and vibration in a wide variety of heating, ventilating and air conditioning products. Torrington's laboratory is completely equipped for this work, and Torrington engineers are ready to help solve *your* air-moving problems.

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Leading designer and producer of air impellers for the heating, ventilating and air conditioning industries.

RANGED ALONG THE OUTER WALLS of the Virginia Shoe Co., 17 heat pumps provide 85 tons of automatic cooling and heating in all-electric plant.

17 Heat Pumps Control Atmosphere For Hides, Workers at Virginia Shoe Co.

BLOOMFIELD, N. J. — Seventeen packaged air-source heat pumps are providing automatic heating and cooling in what may be the first truly all-electric factory in the world.

The 5-ton General Electric "Weathertron" units are employed by Virginia Shoe Co. to electrically heat and cool its new plant in historic Fredericksburg, Va.

This company is housed in a one-story insulated cinder block building in which production, assembly, and office areas total more than 25,000 sq. ft. The company employs about 300 people.

In addition to the less tangible benefits of employe comfort and morale, company officials reported a good business reason for air conditioning: Maintaining a constant temperature and an even level of relative humidity is especially important in shoe manufacture. Hides used in shoes are easier to work in a controlled atmosphere and a product of more consistent quality is possible.

Individual zone control was necessary throughout the plant. Twenty-nine KW of resistance heaters are used for glueing and drying operations and some 132 fractional horsepower motors are used on the company's machines.

To meet the widely varying heating and cooling requirements imposed by this equipment, each heat pump has its own thermostatic controls to automatically adjust its performance to the actual needs of the area it serves.

The air conditioning was designed on the basis of 95° dry bulb, 78° wet bulb, which is standard for the Fredericksburg area. The 17 Weathertrons have a total installed cooling capacity of 85 tons of refrigeration.

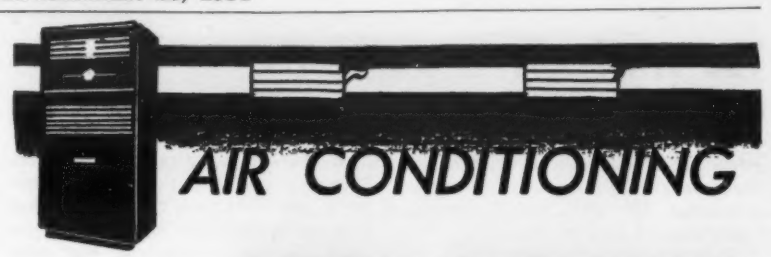
All units are located in space around the outside walls with 5 in. between the units and walls. Short stub ducts supply each individual unit with outdoor air.

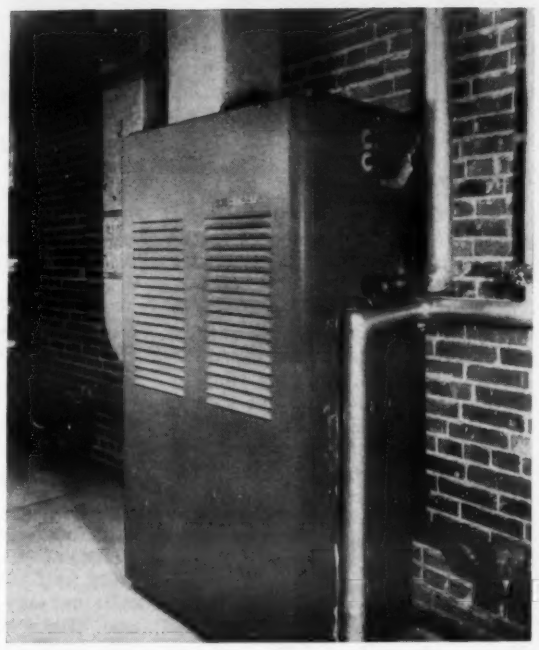
In winter, air-source heat pumps extract heat from this outdoor air, pumping it into the building being heated. In summer they reverse themselves automatically, extracting heat from indoor air and pumping it outside. No water is used in these operations.

The local utility estimated the annual cost for heating and cooling Virginia Shoe to be about $2,500, a 30% advantage over the conventional fuel-fired system.

"This advantage is due in part to the all-electric nature of the factory," it was pointed out.

Fred A. Payne, Fredericksburg Weathertron dealer, sold, designed, and installed the unusual application. He reports that because the units were completely packaged and required only electrical connections, the entire year-round air conditioning system was installed in three weeks using only two skilled installers and two helpers.





ONE OF THE THREE Typhoon packaged air conditioners that were installed recently to cool visitors to Lincoln's Tomb. This is one of the first national shrines to be air conditioned.

Architecture Unmarred, Tours Continue as 3 Packaged Units Are Put In Lincoln's Tomb

SPRINGFIELD, Ill. — Lincoln's Tomb here has become one of the first national shrines to be air conditioned.

The recently completed installation of three Typhoon air conditioning units is intended to increase the comfort of the thousands of visitors to the shrine. The work was done without interfering with regularly conducted tours and without marring the architectural integrity of the structure, the Typhoon Air Conditioning Co. reported.

A small, roughly rectangular granite structure, Lincoln's Tomb offered very limited space for the placement of air conditioning equipment, the company said.

The three major areas to be air conditioned were the sarcophagus chamber and the crypt room, situated at the north end of the structure, and the rotunda through which the public enters, situated at the south end.

The areas are connected by an open marble hallway running entirely around the interior portion of the tomb.

To condition the north end of the tomb, two 2-hp. units were installed behind the marble partitions which separate the hallway from the interior portion, at a point approximately halfway between the north and south ends.

Four large supporting columns occupy the interior portion, and, therefore, the units had to be placed in the narrow passageways between those columns and the partitions.

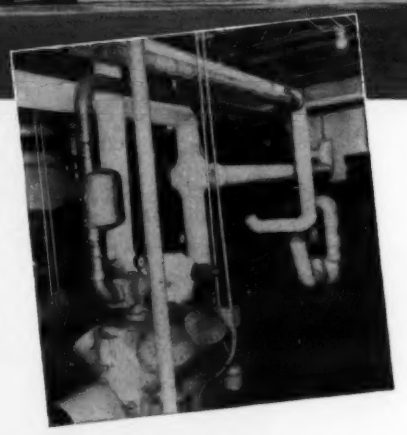
Ducts were run from each unit toward the rear of the building in a concealed false ceiling, to ceiling diffusers located in the sarcophagus chamber and in the hallway adjacent to the chamber.

The third air conditioner, a 3-hp. Typhoon unit, was placed in the south portion of the tomb, near the rotunda. Ducts were run around the rotunda to existing supply grilles previously used for a simple ventilating system.

The marble hallway connecting the air conditioned areas is cooled by return air. Return air openings from the previous system were already present in the walls, and existing fresh air intakes, in the interior portion, were also employed. Thus the installation was accomplished without affecting the architecture in any manner.

Acme furnished the package for RYAN BUILDING 100-TON COOLING SYSTEM

CONTRACTOR — Art Calvert Sales & Service
CONSULTING ENGINEER — R. L. Duffer

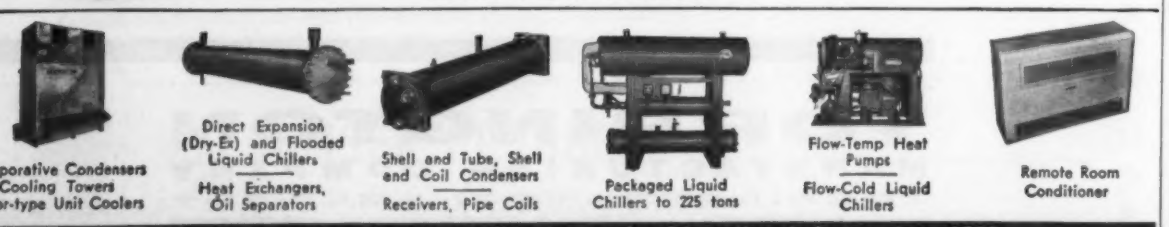


When the Florida Power & Light Company decided to air condition its Ryan Building offices in Miami, Florida they took the easy way of installing a system by using an Acme Flow-Therm Packaged Water Chiller. This unit consisting of a two-circuit Acme Dry-Ex, two Acme HX Heat Exchangers, and two Acme STF Condensers furnishes 300 GPM of 46° water to the system. It is used in conjunction with two 50 HP Carrier Compressors.

Buying a "package" gave the company a perfectly balanced unit, greatly reduced their installation time and expense, saved space, and, being an Acme Flow-Therm, enabled them to select a packaged unit specifically tailored to their job requirements.

The Flow-Therm is the latest addition to the Acme line of air conditioning and refrigeration products. It is the answer to the contractor and user who wants the benefits of a packaged unit along with the chance to specify matching Acme components. It can be used with any model or make compressor. See your Acme representative for more information on the Flexible Flow-Therm.

ACME INDUSTRIES, INC.
Mfgs. of a complete line of Air Conditioning and Refrigeration Equipment
JACKSON, MICHIGAN



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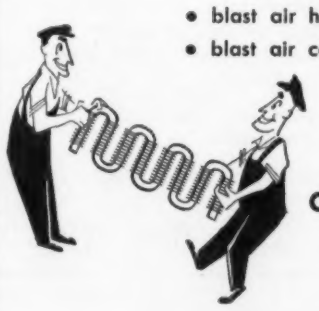

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RANGED ALONG THE OUTER WALLS of the Virginia Shoe Co., 17 heat pumps provide 85 tons of automatic cooling and heating in all-electric plant.

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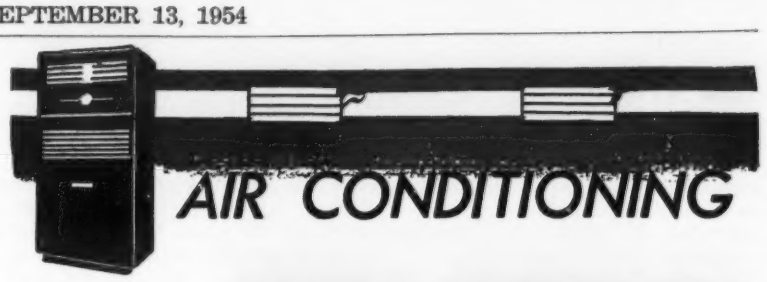
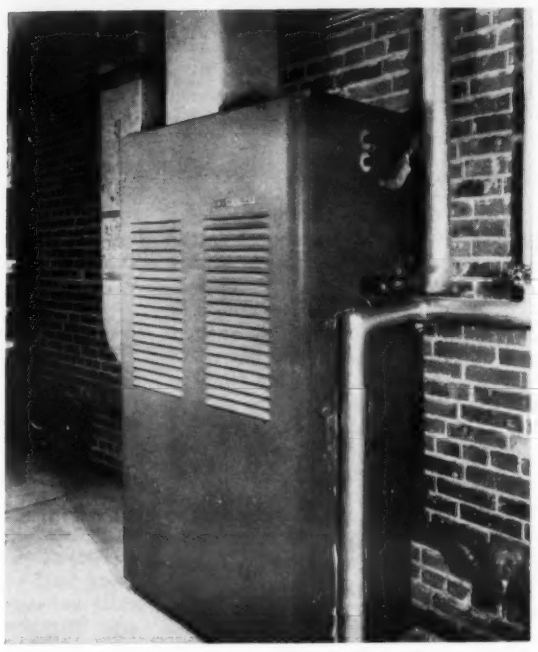
In winter, air-source heat pumps extract heat from this outdoor air, pumping it into the building being heated. In summer they reverse themselves automatically, extracting heat from indoor air and pumping it outside. No water is used in these operations.

The local utility estimated the annual cost for heating and cooling Virginia Shoe to be about $2,500, a 30% advantage over the conventional fuel-fired system.

"This advantage is due in part to the all-electric nature of the factory," it was pointed out.

Fred A. Payne, Fredericksburg Weathertron dealer, sold, designed, and installed the unusual application. He reports that because the units were completely packaged and required only electrical connections, the entire year-round air conditioning system was installed in three weeks using only two skilled installers and two helpers.





ONE OF THE THREE Typhoon packaged air conditioners that were installed recently to cool visitors to Lincoln's Tomb. This is one of the first national shrines to be air conditioned.

Architecture Unmarred, Tours Continue as 3 Packaged Units Are Put In Lincoln's Tomb

SPRINGFIELD, Ill. — Lincoln's Tomb here has become one of the first national shrines to be air conditioned.

The recently completed installation of three Typhoon air conditioning units is intended to increase the comfort of the thousands of visitors to the shrine. The work was done without interfering with regularly conducted tours and without marring the architectural integrity of the structure, the Typhoon Air Conditioning Co. reported.

A small, roughly rectangular granite structure, Lincoln's Tomb offered very limited space for the placement of air conditioning equipment, the company said.

The three major areas to be air conditioned were the sarcophagus chamber and the crypt room, situated at the north end of the structure, and the rotunda through which the public enters, situated at the south end.

The areas are connected by an open marble hallway running entirely around the interior portion of the tomb.

To condition the north end of the tomb, two 2-hp. units were installed behind the marble partitions which separate the hallway from the interior portion, at a point approximately halfway between the north and south ends.

Four large supporting columns occupy the interior portion, and, therefore, the units had to be placed in the narrow passageways between those columns and the partitions.

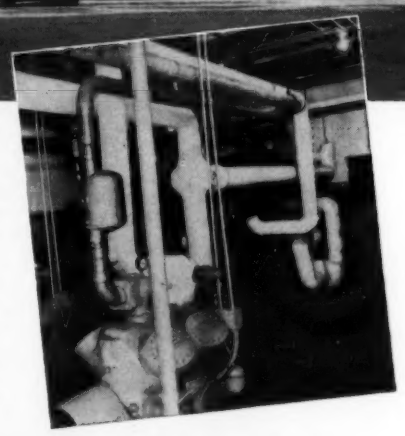
Ducts were run from each unit toward the rear of the building in a concealed false ceiling, to ceiling diffusers located in the sarcophagus chamber and in the hallway adjacent to the chamber.

The third air conditioner, a 3-hp. Typhoon unit, was placed in the south portion of the tomb, near the rotunda. Ducts were run around the rotunda to existing supply grilles previously used for a simple ventilating system.

The marble hallway connecting the air conditioned areas is cooled by return air. Return air openings from the previous system were already present in the walls, and existing fresh air intakes, in the interior portion, were also employed. Thus the installation was accomplished without affecting the architecture in any manner.

Acme furnished the package for RYAN BUILDING 100-TON COOLING SYSTEM

CONTRACTOR — Art Calvert Sales & Service
CONSULTING ENGINEER — R. L. Duffer



When the Florida Power & Light Company decided to air condition its Ryan Building offices in Miami, Florida they took the easy way of installing a system by using an Acme Flow-Therm Packaged Water Chiller. This unit consisting of a two-circuit Acme Dry-Ex, two Acme HX Heat Exchangers, and two Acme STF Condensers furnishes 300 GPM of 46° water to the system. It is used in conjunction with two 50 HP Carrier Compressors.

Buying a "package" gave the company a perfectly balanced unit, greatly reduced their installation time and expense, saved space, and, being an Acme Flow-Therm, enabled them to select a packaged unit specifically tailored to their job requirements.

The Flow-Therm is the latest addition to the Acme line of air conditioning and refrigeration products. It is the answer to the contractor and user who wants the benefits of a packaged unit along with the chance to specify matching Acme components. It can be used with any model or make compressor. See your Acme representative for more information on the Flexible Flow-Therm.

ACME INDUSTRIES, INC.
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JACKSON, MICHIGAN

Evaporative Condensers
Cooling Towers
Floor-type Unit Coolers

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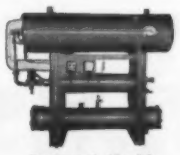
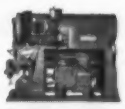
Shell and Tube, Shell and Coil Condensers
Receivers, Pipe Coils


Packaged Liquid Chillers to 225 tons


Flow-Temp Heat Pumps
Flow-Cold Liquid Chillers

Remote Room Conditioner

Continuously serving the air conditioning and refrigeration industry since 1919

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- compact coils for refrigeration condensers
- blast air heating coils
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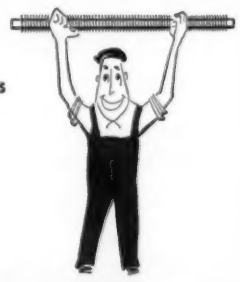

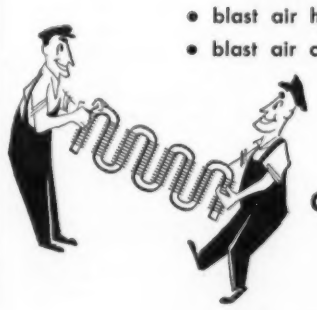

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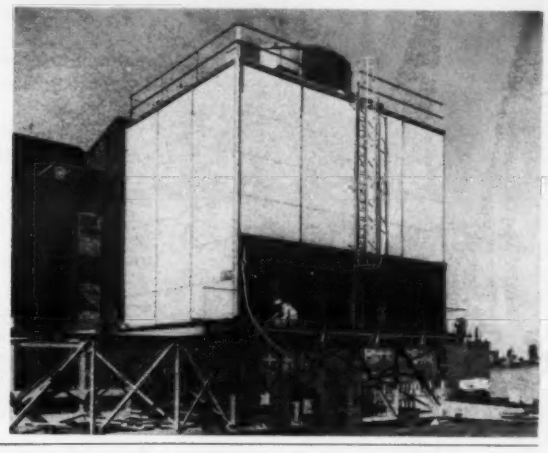
222 CANAL STREET ROME, NEW YORK

COATED DRIP PANS CUT CORROSION

Neoprene Paint Saves Department Store $9,000 In Replacement Costs



ALL SUPPORTING metalwork was painted with neoprene. Extension on structure is for future installation of another large tower.

PHILADELPHIA — Neoprene maintenance paint has virtually eliminated corrosion on drip pans of air conditioners and cooling towers at Lit Brothers department store, saving the Philadelphia firm an estimated $9,000 or more in pan replacement costs, the management reports.

The original application is still intact after two years, and no maintenance has been required over the entire period. Moreover, building superintendent R. M. Potts reckoned after a recent inspection that the pans will be good for somewhere between four and six years of additional service.

STORE USES 18 AIR CONDITIONERS

The five-story, block-long Lit Brothers store is cooled by 18 air conditioning units ranging in capacity from five to 30 tons. Despite periodic applications of various types of coatings, corrosion had progressed to a point where pans were actually leaking in less than four years after the system was installed.

From all reports, the problem of severe drip-pan corrosion is anything but unique with Lit Brothers. Moisture, air, and water set up ideal corrosion conditions in air conditioning units, and even if it were only necessary to deal with these, it would be a tough problem. The recent rash of "smog," "smaze," and other air-pollution publicity has revealed that air contains much foreign matter—and contaminants are picked up by the water as large volumes of air move through the air conditioner.

HIGH ACIDITY INCREASES CORROSION

Chemical analysis of water taken from the units in different parts of a city will vary, depending upon proximity to industry plants and type of industry involved. In most cases, however, water from "uncontrolled" units will be distinctly acid, in the range of about pH 4 to 4.3 (Water that is neutral—neither acid nor alkaline—has a pH of 7). Because of this acidity, a high rate of corrosion within the unit will—and does—result.

Corrosion can be controlled and minimized in most of the piping system by treating condenser-cooling water with various types of corrosion-inhibiting chemicals. In cooling-tower drip pans, however, flow rates are low, and any foreign matter in the system falls to the bottom of the pan and forms a slime or sludge. Precipitates resulting from the water's absorption of sulfur fumes, carbon dioxide, and other waste gases in the air further add to the acid sludge accumulation. Thus, even though the water is properly treated, corrosion occurs under the sludge.

The situation is, if anything, worse in the case of drip pans in the air conditioning units themselves, it is said. Here, where water condenses directly out of large volumes of air onto evaporator coils and exposed piping, the pH has in some instances been found to reach 2.5.

AVERAGE LIFE ONE YEAR

Maintenance men at Lit Brothers found that even under the relatively mild conditions prevailing in downtown Philadelphia, the best coatings formerly used would last only a year. Fish-oil-base materials, vinyls, and bituminous-base coatings soon lost their resilience, they stated, and couldn't be used for patching in areas where pitting was most severe—they cracked and lost their bond from normal expansion and contraction, or when one of the crew walked over the surface for inspection. Periodic scraping and cleaning to remove sludge deposits also took their toll on the drip pans.

Pinholes were common, and some of the pans had holes the size of a penny. Faced with the certain imminent loss of all 18 pans, the maintenance chief decided to make one last try with a coating. "Fortunately," says Potts, "we chose neoprene."

PAINT SPECIALLY COMPOUNDED

The material selected was a neoprene maintenance paint specially compounded for maximum chemical resistance and long life under broad range of operating conditions. The paint, manufactured by Chemical Coatings & Engineering Co., Broomall, Pa., has found widespread application in chemical and industrial plants where corrosive conditions are particularly severe, as well as for uses involving constant immersion in water.

First, pan surfaces were prepared by chipping and scraping with an ordinary putty knife. Next, a coat of CC&E's No. 107 primer was applied and allowed four hours to dry. This was followed by two heavy coats of the gray CC&E No. 362 neoprene maintenance paint, with one hour for drying between coats.

PAINT HELPS PATCHING JOB

Hole-patching was accomplished by covering them with metal or canvas patches laid in the neoprene paint after the prime coat had dried.

The patch was then thoroughly saturated with heavy sloshings of paint to make it a tightly bonded, integral part of the coating.

Applied in this manner, the finished neoprene film is in effect a tough, impermeable sheet of chemically-resistant synthetic rubber about six mils thick. There is no leaching-out of oils or plasticizers as with most other types of coatings, so the neoprene film remains flexible and resilient for long years of severe service.

The same technique can be used on any type of air conditioner, from the smallest window unit to the largest commercial installation, as well as on ducts, supporting structures, and other metalwork where corrosion is likely to occur.

Where air or water are known to be especially corrosive, the manufacturer recommends a third and possibly even a fourth coat, for a total build-up of between eight and 10 mils. Additional coats should also be applied to areas on which wear is known to be excessive.

Service & Supplies

ABOVE: RUST—literally by the bucketful—was chipped and scraped from the cooling tower drip pan preparatory to applying a neoprene coating. Corrosion had produced this condition in about a year.

ABOVE RIGHT: FIRST COAT of neoprene maintenance paint goes on after primer is completely dry. For best results, material should be flowed on like enamel, without trying to "scrub" or brush it out.

RIGHT: APPLYING FINAL COAT. Finished film is actually a sheet of chemical-resistant neoprene synthetic rubber.

20-Year Guarantee!

ON THE WETTED DECK SURFACE

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2 to 100 tons

"Built like a Battleship"—economical, lastworthy. Pressure-treated wood in wetted deck surface guarantees against rotting or fungi growth. Stainless steel fan and shaft, plus individual cabinet coatings of Vinsynite, Vinyl Aluminum and chlorinated rubber, add important years of life.

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An open letter to . . .

Kelvinator

DETROIT 32, MICHIGAN

ALL REFRIGERATION EQUIPMENT DEALERS:

Have you noticed the ever-increasing trend toward bigger and fancier shopping centers — with modernistic store design and huge parking areas?

We have — and we got to thinking about why they're so extremely successful in attracting crowds of customers. Is it because they have lots of glitter and sparkle...a new, fresh look... fast service? Partly, perhaps — but, we believe it's mainly because they offer the convenience of ONE-STOP BUYING!

It all boils down to the fact that customers like to save driving and parking time...get all of their immediate needs in one place — and that's exactly what you do when you buy from your Kelvinator Commercial Equipment Wholesaler.

You'll find he's a ONE-STOP SUPERMARKET for all your commercial refrigeration needs. He not only sells the best and most complete lines of open and sealed condensing units — but he sells all nationally recognized "name" brands of tubing, fittings, valves, controls, tools...in fact, everything for refrigeration installation and service as well.

There's a Kelvinator Commercial Equipment Wholesaler in your locality. Get acquainted with him today. He's a friendly fellow who's in business to help you save time and money... and to serve you better!

Sincerely,

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See your local Kelvinator Commercial Wholesaler for all your refrigeration equipment needs . . .

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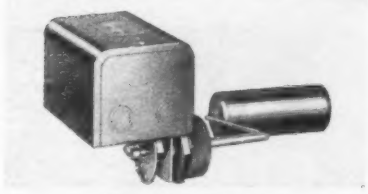
Division, American Motors Corp., Detroit 32, Michigan

What's New

When requesting further information on new products, please use "Information Center" form.

Screw-In Tank Alternator Is for Condensate Pumps



KEY NO. D-920

MILWAUKEE—A new screw-in tank alternator for condensate pumps has been designed by the Square D Co. here. It provides a simple, positive means of mechanically alternating the operation of two pumps installed in a duplex system with a tank.

The function of this control is to provide alternate cycles of operation to insure even wear of the pumping units. It thus eliminates the evils of long standby for one of the two pumps, the company said. The alternator further provides the additional function of starting the second pump in cases where extra capacity under peak conditions is required.

The new Class 9038 CG alternator is interchangeable in tank mounting with the veteran Class 9037 Type HG screw-in tank float switch, affording conversion to duplex pumps.

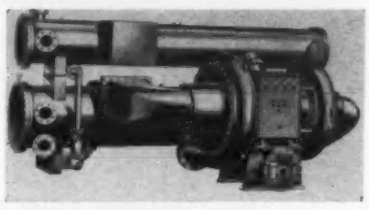
The flexibility of the switch reduces the stocking problem to a minimum. It is possible to change the float position from the right to the left hand side or visa versa. Contacts may be converted to either open or close on liquid rise.

Without removing the switch from an installation, float travel may be adjusted in the field, within limits, by loosening two screws and moving the float stops to the desired position.

A float position indicator and indicating dial aid in obtaining the proper settings. The switch will function properly under a pressure of 50 p.s.i.

Switches are available for 110, 220, 440, and 550 volts. The structure consists of two 2-pole, double break, silver-to-silver, visible and vertical contact mechanisms. It is of the positive snap action toggle type.

All parts have corrosion resistant finish. The immersed working parts are entirely of brass, copper, or stainless steel.



Trane Adds 3 Large Water Chillers to Line

KEY NO. D-921

LA CROSSE, Wis.—Three larger size "CenTraVac" water chillers for comfort or process air conditioning have been introduced by The Trane Co., manufacturer of air conditioning, heating, and ventilating equipment. With the additional units the line now includes eight sizes from 45 to 400 tons capacity.

Trane CenTraVacs incorporate a hermetic centrifugal compressor that automatically matches power consumption to load variations from 100% to 10% of compressor capacity. Power input is limited to actual cooling requirements.

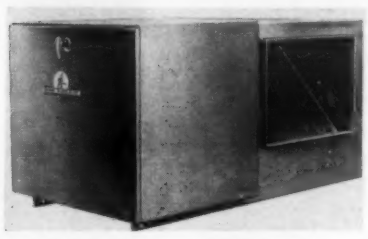
The CenTraVac starts, stops, and runs automatically with the controls interlocked for added safety.

The compressor motor is hermetically sealed inside the casing.

The compressor is direct drive type. Elimination of gear box or belt drive results in up to 5% further power savings, it is claimed.

CenTraVacs can be installed without special bases. Vibration is reduced to a minimum—a coin can be balanced on the housing while the unit is started, run at full load, and stopped.

Complete information is contained in Bulletin DS 399.



Iron Fireman Offers 2 Central Cooling Units

KEY NO. D-922

CLEVELAND — Two new central air conditioning units for domestic and light commercial applications have recently been announced by Iron Fireman Mfg. Co. here.

One unit, designed to match the Iron Fireman highboy oil or gas furnace, is available in 2-ton capacity. An inlet air opening is provided in the side panel for connection with a warm air furnace or with a return duct if no furnace is involved in the installation.

The second unit is especially designed to be used in combination with the Iron Fireman oil-fired or gas-fired suspended furnace. This unit is compact, yet permits easy access to all its components, the company said.

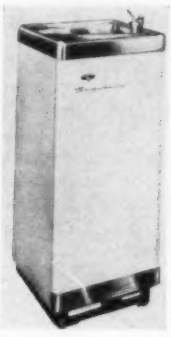
It is built in 2-ton and 3-ton sizes. Air circulation and filtering are provided by the furnace, or by a separate blower if the unit is installed by itself.

Both the highboy cooling unit and the horizontal cooling unit are available with or without cooling towers. Their hermetically sealed cooling systems are guaranteed for five years. Both units may be ordered with either single phase or three-phase compressor motors.

Frigidaire Modifies 5 Drinking Water Coolers

KEY NO. D-923

DAYTON—New modifications to the line of pressure-type drinking water coolers for commercial and industrial use have been announced by the Frigidaire Div. of General Motors Corp.



The line consists of five self-contained bubbler models that offer increased flexibility of application and operation.

The units are powered by Frigidaire rotary compressors. Three models have air-cooled condensers and two have water-cooled condensers.

The three air-cooled models have a capacity for cooling 6, 12, and 18 g.p.h. of water, respectively. The two water-cooled models each cool 14 g.p.h. of water, but one of these, designated the WWXT-14, is equipped with a special metal container which encloses all electrical switches and controls in conformance with Underwriters explosion-proof specifications.

This model is designed primarily for use in the petroleum industry, and chemical and industrial plants where an explosion hazard might exist. Its companion model is especially designed for use in locations where dust and lint might clog an air-cooled condenser where room temperatures are excessively high, causing less efficient cooling.

Other features include: foot or hand operated bubbler controls; instantaneous cooling of the water as it is delivered; water temperature control; stainless steel, splash-proof tops; Bonderite-treated steel cabinets; and "Coco-Rio" beige color styling.

Bottle-type models are also available.

Wagner®
ELECTRIC MOTORS
... the choice of leaders in industry
for single-phase motor applications
Wagner Type RK is the Right Kind of motor to use...

Wagner capacitor-start induction motors are the *right kind* of motors to use for most single-phase applications. They have become first choice of many leading manufacturers of air conditioners, refrigerators, freezers, water pumps, and motor-driven tools, and are used in many other similar fractional or integral horsepower applications.

These motors offer low maintenance cost—only a minimum of servicing is required—and they give many years of reliable service with unusual freedom from vibration and noise.

Pictured above is the Wagner Type RK, resilient-mounted capacitor-start induction motor in the new 56 frame that is used for ⅓, ½ and ¾ hp ratings. Smaller fractional ratings, and integral sizes from 1 through 5 hp, are also available.

Wagner rigid base Type RK motor, in the new 56 frame size. The formed steel base is securely welded to the rolled steel frame to produce a strong, rigid mount that will not get out of alignment.

Frames for these motors are made of thick rolled steel, with machined beads which accurately position the end plates. The frames have no openings, and are treated inside and out to prevent rusting.

These motors are equipped with the Wagner quick-break switch that disconnects the starting winding and capacitor from the line when the motor approaches operating speed. It operates over a million times without trouble.

Wagner Electric Corporation EST. 1891

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AUTOMOTIVE BRAKE SYSTEMS—AIR AND HYDRAULIC

M54-15

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What's New (Con't)

Sprague 'Cap-Subber' Restores Motor to Service

——KEY NO. D-924——

NORTH ADAMS, Mass.—The "Cap-Subber," a new device designed to act as a substitute for any motor-starting capacitor and permit immediate restoration of service until a replacement capacitor is obtained, has recently been announced by the Sprague Products Co. here.

This new instrument enables motor repairmen to keep customers happy in their emergencies when essential equipment such as refrigerators, air conditioners, compressors, pumps, fans, etc., cut out.

When the rating of a worn-out capacitor is unknown, the Cap-Subber acts as a rating selector and quickly determines the correct capacitance. A series of five switches thrown in various combinations will provide a substitute for any capacitor from 21 mf to 648 mf. Complete instructions on how to use the unit are on the front panel of the Cap-Subber.

Housed in a gray, wrinkle-finish steel case measuring 9 in. high by 6 in. wide by 2½ in. deep, the instrument weighs only 3 lbs. Designed for 115 volts, 50-60 cycle operation, the net price of the model C-1 Cap-Subber is $21.50. Complete details are given in Manual C-910 available upon request.

Lern Case Combines Display and Storage Space

——KEY NO. D-925——

CHICAGO—A combination refrigerated display case and storage refrigerator or freezer has been added to its line of restaurant equipment by Lern, Inc. here.

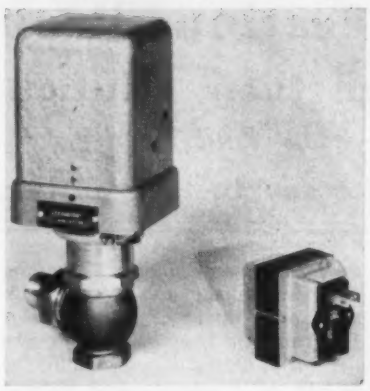
The new portable self-contained case is constructed of stainless steel with 1½ in. of Fiberglas insulation. The 7-cu. ft. display area is provided with fluorescent lighting and there is also lighting in the 7-cu. ft. storage compartment.

Other features of the model L-1042-SC include self-evaporating drain, adjustable shelves, cold wall cooling in display area, fin coil cooling in storage compartment, and pressure control with visible scale. All hardware is brass.

Outside dimensions of the case are 42 in. long, 60 in. high, and 24 in. deep.

M-H Designs Control System for Existing Buildings

——KEY NO. D-926——



MINNEAPOLIS—Automatic and selective control of temperatures on an individual room-by-room or suite-by-suite basis can now be achieved in existing buildings with a newly developed thermostatic system that requires no structural changes for installation, Minneapolis-Honeywell Regulator Co. has announced.

The new, low-cost simplified system was designed by Minneapolis-Honeywell for existing office buildings, apartments, hospitals, and hotels to control steam or hot water radiators or console and window air conditioners, it is explained.

Since it can be installed room-by-room or suite-by-suite it permits existing building managements to make the changeover to individual temperature control as their budgets permit.

The system consists of a new motorized electric radiator valve, a small transformer, and the company's new round thermostat which has a snap-on plastic cover that can be removed and painted or papered to harmonize with interior decorating themes.

Installation requires no tearing up of floors or walls and can be done even without disturbing occupants, the company further claims.

The two-position motorized valve is designed to control the flow of either low-pressure steam or hot water and is installed in place of a conventional hand radiator valve. It is connected to the wall thermostat and transformer with a few feet of electric wiring, according to the manufacturer.

Tenants simply set their thermostats for the desired temperature in the room. Each regulated radiator operates independently of all others in the building. This not only enables occupants to "dial" their own comfort preference, but makes it possible to adjust the building's heating plant for such outside factors as sun exposure, shade, and prevailing winds, the company declared.

Although the system is fully automatic, the valve includes a manual feature which enables the users to operate the radiator even in case of power failure.

King-Size Cooker Fryer Has 7-Pint Capacity

——KEY NO. D-927——

CHICAGO—A king-size cooker fryer with a 7-pt. capacity has been introduced by Finders Mfg. Co. here.

The new Holliwood unit measures 11⅞ in. by 8¼ in. by 11⅞ in.

It includes time-table cover, French frying basket with removable handle, cord set, and cast aluminum cooking well.

Other features include jeweled pilot light, automatic thermostat, quick drain spigot, and on and off switch.

It operates on a.c. only, 115 volts, pulling 1,450 watts, Shipping weight is approximately 16 lbs.

Finish is chrome and contrasting black enamel.

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ALL MAJOR ASSEMBLIES
made for each other
. . . and by
CHRYSLER AIRTEMP!

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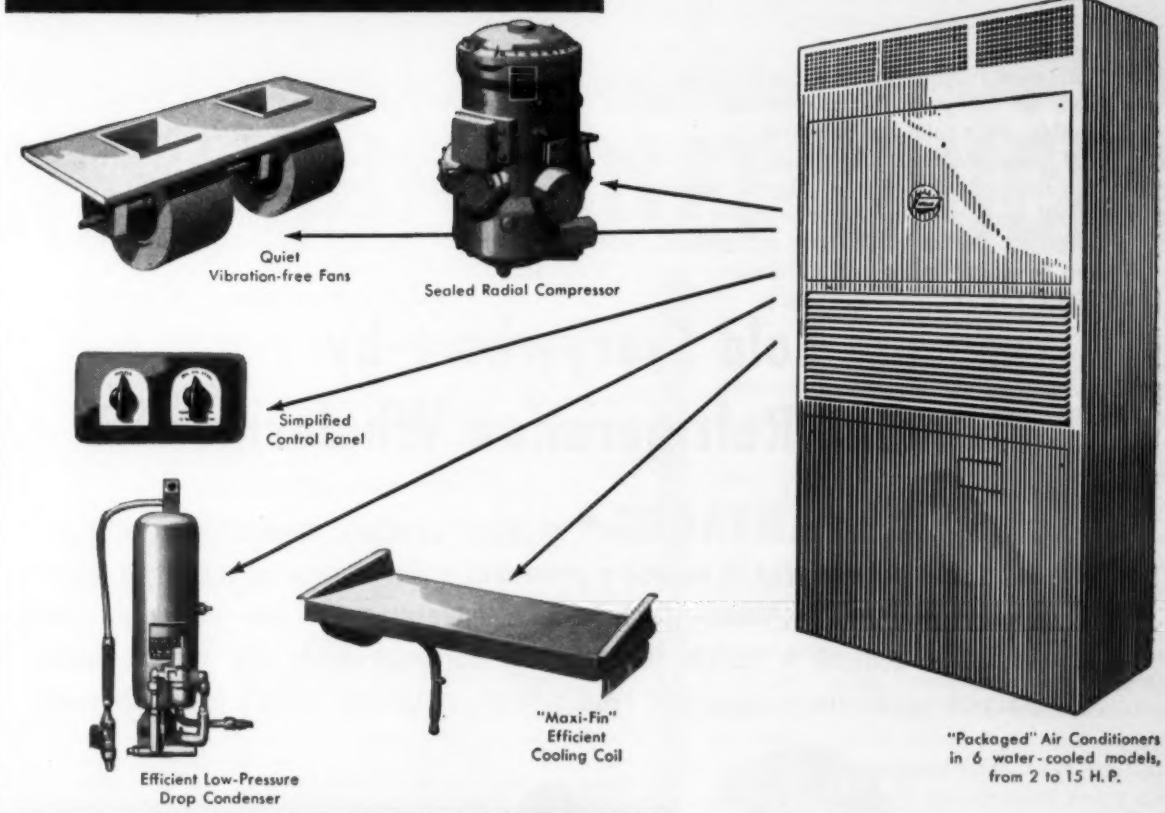
Chrysler Airtemp's complete factory quality control is one of the big reasons why you can count on every Chrysler Airtemp "Packaged" Air Conditioner you sell to perform efficiently and dependably right from the start. But it's only one of many reasons why it will pay you more to sell Chrysler Airtemp! Send coupon now for all of the facts!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Refrigeration Problems

and their solution

by Paul Reed

For Service and Installation Engineers

Paul Reed

Pressures Within The Compressor Cylinder (2)

COMPRESSOR INDICATOR

An instrument that would give us these instantaneous pressures in the cylinder during one r.p.m. of a cylinder, consisting of a compression stroke and a suction stroke, would be extremely helpful in analyzing the operation of a compressor for inefficiencies and for tracing the causes.

Such an instrument, known as a Compressor Indicator, exists and has been used with large compressors for many years. Moreover, it not only indicates the instantaneous pressures in the cylinder but it also draws the curves similar to Figs. 1 and 2. Unfortunately it has not been developed for field use for small compressors.

Nevertheless, we shall discuss the Compressor Indicator in the next instalment and describe its use, for a study of the Indicator Diagram that it makes will be very helpful in better understanding the effects of discharge and suction valve action, clearance volume, high head pressures, worn rings, etc., on compressor efficiency.

The Compressor Indicator instrument itself is made in various forms, but essentially it consists of a small drum that turns on an axle, a chart wrapped around this drum, a pen or pencil actuated by the pressures in the compressor cylinder, and suitable linkage between the compressor crankshaft and the drum.

A lever is secured to the compressor pulley so that it acts as a crank. By means of suitable linkage or by means of a cord, the lever is connected to the drum in such manner that when the compressor pulley makes one-half a revolution (the compression stroke for example), the indicator drum turns in one direction as much as a whole revolution. Then when the compressor pulley makes the second one-half of its revolution (the suction stroke), the drum of the indicator turns the same as before but in the opposite direction.

A small tube leads from the very top part of the compressor cylinder to a small bellows or cylinder with piston, to which is connected by leverage a pencil or inked pen resting on the indicator chart.

COMPRESSOR INDICATOR DRAWS PRESSURE CURVE

When the pressure in the compressor cylinder rises or falls, the pen draws a line on the chart upward or downward. Since the indicator chart is being turned first one way and then in the opposite direction in time with the compression and suction strokes as the pressures inside the compressor cylinder are changing, the pen draws a curve on the indicator chart during the suction stroke, similar to the curve shown in Fig. 2, and during the compression stroke it draws a curve similar to but in the opposite direction to that shown in Fig. 1.

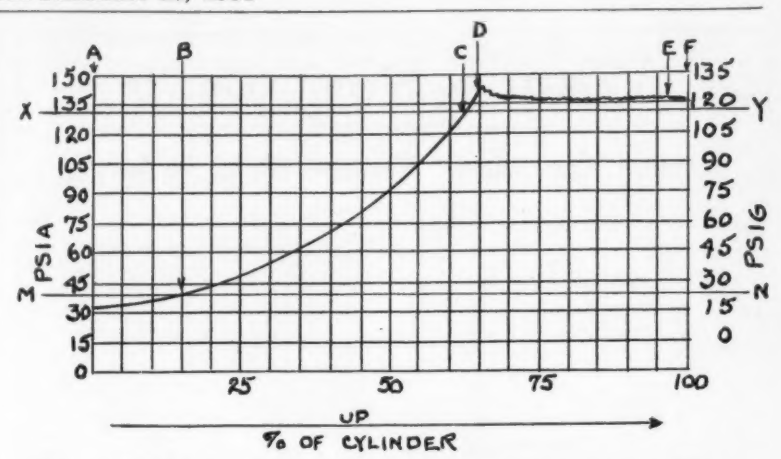

Fig. 1—Typical pressures in the cylinder during compression stroke.

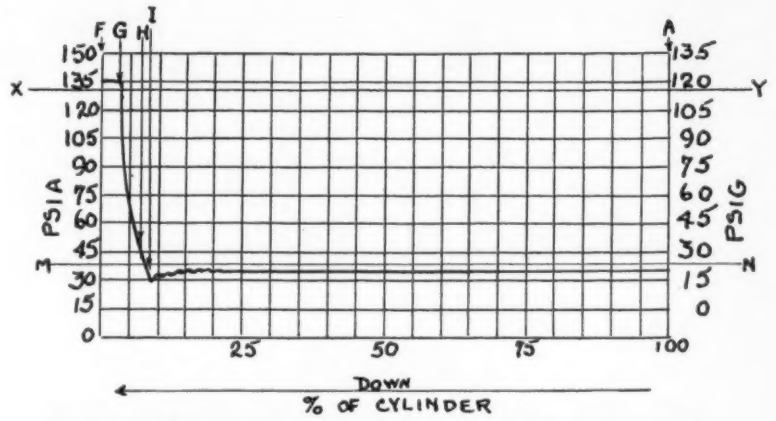

Fig. 2—Typical pressures in the cylinder during suction stroke.

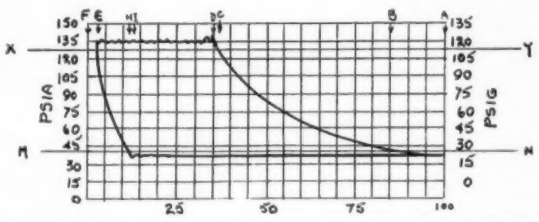

Fig. 4 — Indicator diagram incorporating the curves shown in Figs. 1 and 2.

Fig. 4 shows what an indicator diagram would have looked like for one revolution of the compressor for which Figs. 1 and 2 plotted the pressures. As in Figs. 1 and 2 the horizontal lines on the indicator chart represent pressures, and the vertical lines represent percentages of the compressor stroke.

The curve for the pressures in the compressor cylinder during the suction stroke therefore appears on the lower part of the chart

(Continued on next page)

ARE YOU SURE YOU'VE NEVER HAD TROUBLE WITH OIL?

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If moisture causes a failure, it has to get into the system somehow. Sloppy handling of oil or improper purging can cause moisture problems. But so can inferior refrigeration oils that haven't been properly processed.

Strainers, expansion valves, and capillaries shouldn't really be listed as the cause of failure if they're clogged. The real culprit is the stuff that is passing through them. Here again, inferior refrigeration oils that form sludge or contain too much wax are often to blame.

The best way to avoid a lot of call-backs is to use Suniso . . . the refrigeration oil that is used and recommended by most refrigeration manufacturers. Controlled from crude to can by oilmen, Suniso always assures you of both uniformity and high quality . . . it eliminates all your oil problems.

Sold Everywhere by Leading Refrigeration Wholesalers

SUNISO ADVANTAGES • provides adequate lubrication at all temperatures encountered in service • possesses a high degree of stability • won't throw out wax deposits under low temperatures • has extremely low moisture content • resists formation of corrosive acids and carbon under service conditions • separates readily from refrigerant—won't react adversely

SUNISO

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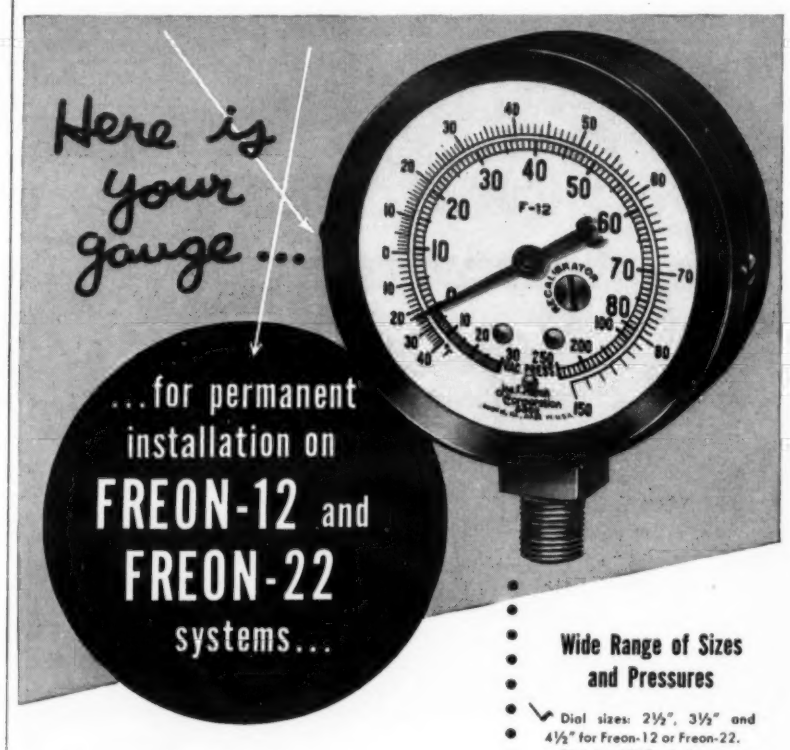
A PRODUCT OF SUN OIL COMPANY



Today's gauge for today's job on those Freon systems. Highly accurate and built down to the last detail to *stay* accurate.

The corresponding temperature scales are in color. Note the wide ranges of sizes and readings in F-12 and F-22 types.

Here is the gauge for permanent installation on refrigeration systems . . . with the Marsh "Recalibrator" to keep it permanently accurate. Write for facts or ***See Your Jobber***

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Wide Range of Sizes and Pressures

- Dial sizes: 2½", 3½" and 4½" for Freon-12 or Freon-22. Dial size, 2½" only for gauges with both Freon-12 and Freon-22 scales.
- Dial range for pressure gauges: 0-300 lbs. and 0-400 lbs. For compound gauges, 30" x 150 lbs., 30" x 300 lbs., 30" x 400 lbs.
- All gauges have "Recalibrator." All except 3½" and 4½" gauges standard with ⅛" male bottom connection and restriction screw in socket. 3½" and 4½" gauge have ¼" N.P.T. connection.

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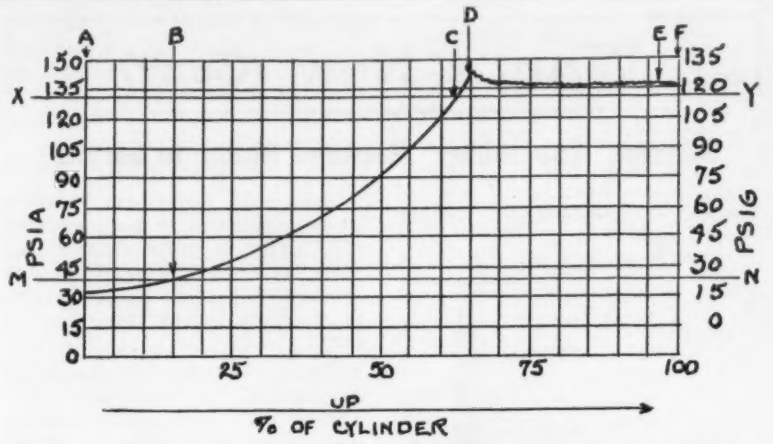

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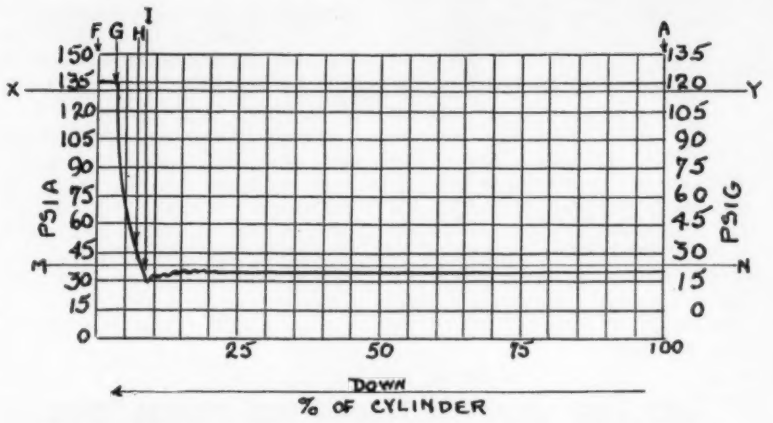

Fig. 2—Typical pressures in the cylinder during suction stroke.

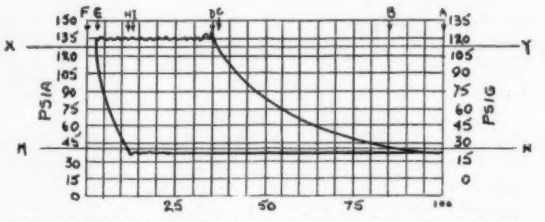

Fig. 4 — Indicator diagram incorporating the curves shown in Figs. 1 and 2.

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(Continued on next page)

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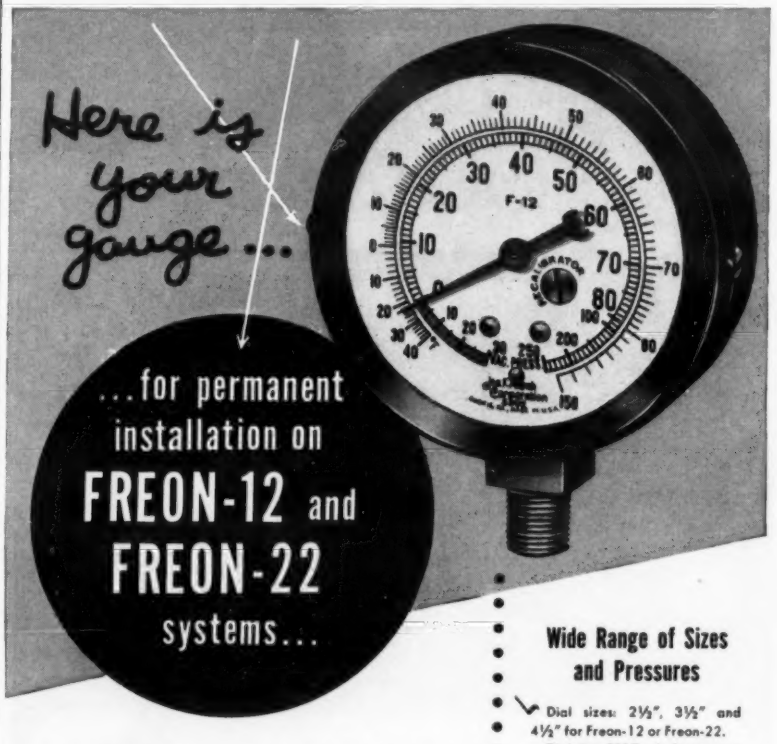

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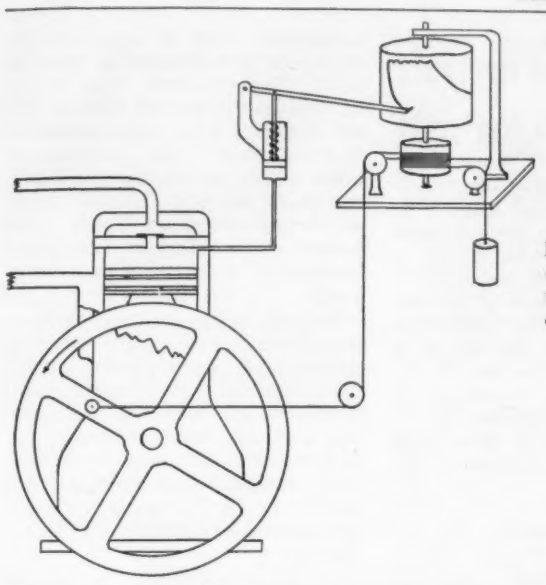

FIG. 3—Illustration of the principle and use of a simple compressor indicator.

Pressures Within the Compressor Cylinder--

(Concluded from preceding page)

from left to right, and the curve for the pressures in the compressor cylinder during the compression stroke appears on the upper part of the chart from right to left.

As before, the compression stroke starts at "A" with the piston at its lowest point in the cylinder or 0% of the stroke (100% of the suction stroke), and with the pressure in the cylinder somewhat below suction pressure, so the suction valve is open. When the piston rises to "B," which is about 15% of the stroke, the pressure in the cylinder equals suction pressure represented by line "MN," so the suction valve closes and remains closed during the remainder of the compression stroke.

At "C," the pressure in the cylinder has got up to condenser pressure represented by line "XY," but it has to rise above condenser pressure to "D" in order to get the additional force necessary to open the discharge valve against the inertia of the valve parts and against the valve spring.

At "D" the discharge valve opens, and for the remainder of the compression stroke the discharge valve "flutters" or floats away from and back toward its seat. Gas continues to be discharged to the condenser, up to "E" which is the point where the piston comes to "top dead center," that is, the end of the compression stroke.

Although the piston stops at "E," there is still some space between the top of the piston and the lower face of the valve plate shown as "F." The space between "E" and "F" is known as the "clearance volume" of the cylinder.

The compression stroke ends and the suction stroke begins at "E." From "E" the piston starts back downward. The high pressure gas trapped in the clearance volume starts to expand and lose pressure rapidly from "E" as the piston starts downward.

First, the discharge valve closes, and finally at "H" the pressure in the cylinder gets down to suction pressure, but the suction valve does not open until "I" when the pressure in the cylinder falls enough below suction pressure for the difference in pressure to overcome the inertia of the parts and the spring of the suction valve.

From "I" back to "A" the suction valve is open and gas from the suction line comes into the cylinder. "A" is the end of the suction stroke and the beginning of the compression stroke, for it is "bottom dead center" of the piston.

The nominal stroke of the compressor is from "A" to "F," but actually the piston only moves from "A" to "E." From "A" to "B" the suction valve is open, so no compression takes place; from "E" to "I" only re-expansion is taking place. It is only from "I" to "B" that refrigerant is being taken out of the suction line and from the evaporator, and that is what counts most—how much refrigerant is circulated. Therefore, from "I" to "B" is the "effective stroke."

EFFECTIVE STROKE ÷ NOMINAL STROKE = VOLUMETRIC EFFICIENCY

If we could build an ideal compressor—one that would start compressing at "A," that had no clearance volume, and whose entire stroke from "F" to "A" would be effective, it would be 100% efficient. That is, the length of the effective stroke compared to the nominal stroke determines the volumetric efficiency (pumping efficiency) of the compressor.

Thus the length from "I" to "B," the effective stroke, divided by the length from "F" to "A," the actual or nominal stroke, is the volumetric efficiency of this compressor in per cent. On our chart it would be from about 15 to 96 or 81, so 81 ÷ 100 = 81% volumetric efficiency.

IDEAL DIAGRAM AS BASIS FOR COMPARISON

Fig. 5 shows what the indicator diagram of an ideal 100% efficient compressor would look like. Note that the suction pressure line "MN" coincides with "DA", the line indicating the pressure in the cylinder during the effective stroke. For this condition, the suction valve would require no pressure to open or close it. The same applies to "XY," the discharge pressure line, and "BC," the line indicating the high pressure developed in the cylinder during the latter part of the compression stroke.

Note, also, that the compression curve "AB" is rather steep, indicating no losses during the compression stroke. Note, also, that there is no clearance volume, so there is no re-expansion of trapped gas during the early part of the suction stroke; therefore line "CD" is straight and drops vertically. Since there is no loss due to re-expansion and since compression starts at "A," the actual and effective strokes are both represented by line "DA," so the volumetric efficiency would be 100%.

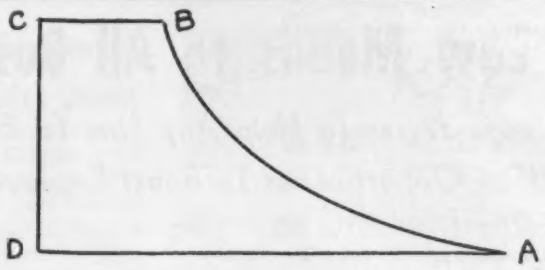

FIG. 5—Ideal indicator diagram of a compressor without clearance or losses, and whose valves are without weight or spring tension.

Obviously, it is impossible to build a compressor whose indicator diagram would be like that shown in Fig. 5, but it gives us an ideal with which we can compare diagrams taken from actual compressors. Such a comparison enables us to analyze the weaknesses of the actual compressors.

For our purposes in this article, such a comparison will also enable us to study the effects of various faults of design, of wear, or of abnormal operating conditions on compressor performance, as shown by the indicator diagrams that would be produced by such compressors.

(To Be Continued)

Honeywell Appoints Maves Pacific Regional Manager

LOS ANGELES—George Maves, manager of the Boston sales office of Minneapolis-Honeywell Regulator Co. since 1948, has been promoted to the position of manager of the firm's Pacific Region, with headquarters in Los Angeles.

He succeeds Gavin S. Younkin, who recently was named general sales manager for the company.

R. W. (Bob) Forster, who has been manager of the Buffalo sales office, has been named to succeed Maves as Boston manager.

Maves, a veteran of 20 years' service with Honeywell, joined the firm in Minneapolis after attending the University of Minnesota. Before becoming branch manager at Boston, he served as regional manager in Denver.

Forster, a graduate of the Massachusetts Institute of Technology, started his career with the company in the New York sales office in 1940 and managed the firm's New Jersey office earlier.

Copeland To Resume Series Of Service Lectures Oct. 13

SIDNEY, Ohio—Glenn Detrick, service manager of Copeland Refrigeration Corp., announces the firm's lecture schedule will resume this fall.

Glenn Detrick

First scheduled meeting is Oct. 13. It will be a combined RSES and Copeland distributor meeting. Williams & Co., Inc., Cleveland, will be the host, Detrick said.

Traditionally a part of Copeland's service program, these how-to lectures are recessed during summer months. Representatives of Copeland's service department meet regularly with wholesalers, jobbers, manufacturers, and their customers and personnel.

Purpose of these meetings, conducted on a nationwide basis, is to suggest efficient service methods to the people who buy, sell, and service Copeland commercial refrigeration equipment.

The last meeting in Philadelphia attracted 285, Detrick indicated.

In their talks, Detrick and his staff demonstrate service techniques on actual Copeland equipment.

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For "easy-to-get" product information . . . use coupon on "What's New" page. Use Key No. for fastest service.

All Larkin refrigeration and air conditioning equipment is designed to give peak performance at low operating costs, whatever the requirements. The same organization that produced the original, patented cross-fin coil maintains a constant effort for better, more efficient design. Just one more reason why Larkin leads.

Manufacturers of the original Cross-Fin Coil • Humi-Temp Units • Frost-O-Trol Hot Gas Defroster • Evaporative Condensers • Cooling Towers • Air Conditioning Units and Coils • Direct Expansion Water Coolers • Heat Exchangers • Disseminator Pans.

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LARKIN COILS
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NEW CHEVROLET TRUCKS

shorten your schedules and cut costs in the bargain!

You can actually count on a Chevrolet truck doing your job faster and for less money. That's a strong claim, sure; but one that's been proved time after time on job after job.

EXTRA POWER SAVES YOU TIME

All three Chevrolet truck engines—the "Thriftmaster 235," the "Loadmaster 235" and the "Jobmaster 261"*—deliver extra horsepower for greater acceleration and hill-climbing ability. You haul your loads on a time-saving schedule and save money doing it—for with Chevrolet's higher compression ratio you use less gas.

BUILT-IN RUGGEDNESS SAVES YOU MONEY

Stronger, more rigid frames, newly designed clutch; huskier rear axles and drive lines in 2-ton models; higher capacity universal joints in medium- and heavy-duty models—these beefed-up built-in chassis features mean your Chevrolet truck is going to stay on the job for a longer time. They also mean you can expect extra-low operating costs.

Another important advantage is Chevrolet's low original cost—lowest of all lines of trucks! You save the day you buy, and you go right on saving as long as you own that Chevrolet truck. Drop by your Chevrolet dealer's and look over the many models he has to offer. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

MOST TRUSTWORTHY TRUCKS ON ANY JOB! CHEVROLET

CHEVROLET ADVANCE-DESIGN TRUCK FEATURES

THREE GREAT ENGINES—The new "Jobmaster 261" engine* for extra heavy hauling. The "Thriftmaster 235" or "Loadmaster 235" for light-, medium- and heavy-duty hauling. **NEW TRUCK HYDRA-MATIC TRANSMISSION***—offered on ½-, ¾- and 1-ton models. Heavy-Duty **SYNCHRO-MESH TRANSMISSION**—for fast, smooth shifting. **DIAPHRAGM SPRING CLUTCH**—improved-action engagement. **HYPOID REAR AXLE**—for longer life on all models. **TORQUE-ACTION BRAKES**—on all wheels on light- and medium-duty models. **TWIN-ACTION REAR WHEEL BRAKES**—on heavy-duty models. **DUAL-SHOE PARKING BRAKE**—greater holding ability on heavy-duty models. **NEW RIDE CONTROL SEAT***—eliminates backrubbing. **NEW, LARGER UNIT-DESIGNED PICKUP AND PLATFORM STAKE BODIES**—give increased load space. **COMFORTMASTER CAB**—offers greater comfort, convenience and safety. **PANORAMIC WINDSHIELD**—for increased driver vision. **WIDE-BASE WHEELS**—for increased tire mileage. **BALL-GEAR STEERING**—easier, safer handling. **ADVANCE-DESIGN STYLING**—rugged, handsome appearance.

**Optional at extra cost. Ride Control Seat is available on all cabs of 1½- and 2-ton models, standard cabs only in other models. "Jobmaster 261" engine available on 2-ton models, truck Hydra-Matic transmission on ½-, ¾- and 1-ton models.*

What New Tax Law Means to All Businessmen

Analysis of Its Provisions Serves To Help Any Firm To Reduce Its Tax Liability and Offers Opportunities To Boost Employe Morale

This is the second part of a two-part article which specifically analyzes the recently enacted new Federal tax law in terms of what it means to the businessman and his employes. First part was published in the Sept. 6 issue.

By James B. Kobak, CPA, Partner, J. K. Lasser & Co.

The new Internal Revenue Code that became the tax law of the land this summer is, without doubt, the most sweeping revision of the statute books in years.

Last week we explored how the new law—through its incentives and concessions—opens new tax benefits to business. This week let's see some of the things that it can do for business's employes—provisions that can raise workers' morale at relatively little cost to you.

Again, in the space available, only some of the important revisions can be highlighted. Your tax adviser is the man to consult to make sure you take advantage of each and every new provision of the law that applies to your operations. The code is loaded with benefits; it's your responsibility to make the most out of them.

Here are some of the ways the new law can help your employes:

Injury and Sickness Benefits Are Expanded

Under the old code, workers did not pay tax on sickness or injury benefits from plans financed by their employers under contracts with insurance companies. But they had to pay on benefits received under plans that the employers financed themselves. Now that's been changed.

You can now arrange for your employes to get benefits, without tax, under a plan that you finance, provided that the benefit payments meet any of these conditions:

(1) The payments are reimbursements for medical expenses incurred by the employe for himself, his wife, or for other dependents.

(2) The payments are for permanent loss or loss of use of part of the body, or for permanent disfigurement of the employe, his wife, or other dependents. In this case, the payment is based on the kind of injury and has no relationship to the length of time that the employe is out of work; the payment is not for medical expenses.

So the employe can deduct any medical cost he has in connection with his injuries, without having to worry about having them reduced by the amount of the payment.

(3) The payments are wages or for loss of wages for the period the employe is out of work because of sickness or injury. The worker pays no tax on any amounts up to $100 a week of such payments. However, the exemption does not apply during the seven days of absence unless the absence from work is due to an accident, or unless the worker is in the hospital for at least one day during his absence.

Example: Jones is out sick for 10 days. He is not injured and does not have to go to the hospital during that time. He gets payments for the full 10 days. But payments for only three of the days are tax free.

Suppose, however, that on the eighth day, Jones is admitted to a hospital. He stays overnight and is discharged the next day. He can leave out the payments for the entire 10 days, based, of course, on the maximum of $100 a week.

Smith, on the other hand is out sick, not in the hospital, for three days. On the fourth day he is injured. This keeps him out of work for five days more. He can't exclude payments for the first three days but he can for the next five —again on the basis of not more than $100 a week.

Death Benefits. The old law said that payments up to $5,000 by an employer to the beneficiaries of a dead employe were tax free. But there had to be a contract calling for the payments. Now there's no tax—even without a contract.

Favorable Treatment for Stock Options

The new law gives to the so-called "variable price options" the same favorable tax treatment provided for "restricted stock options." Stock options no longer have to be in terms of a specified dollar amount; the option price can now be based on a formula. This means you have an easy way to protect your employes against a falling market.

Here's how you can work it: You peg the option price at a percentage (not less than 85%) of the value of the stock during a six-month period or some shorter period within that six months. The six-month period has to include the day on which the option is exercised. If the stock declines between the time the option is granted and the time the employe exercises it, he is fully protected against the drop.

(Under a fixed option, he would have had to pay a specified dollar amount—amounting to at least 85% of the market value of the stock at the time the option was granted — regardless of what happened to the market price afterwards. The only requirement for the variable price option is that the employe would have had to pay at least 85% of the stock's market value at the time of granting if he had exercised it then.)

It might be a good idea to give your employes two stock options now. One would be for a fixed dollar amount. The other would be a variable price option. If the price of the stock goes up, the employe exercises the option with the fixed price. If the market value goes down, he exercises the variable price option. Either way, he gets the stock at the lowest possible price.

Meals and Lodging Not Included as Income

The new law liberalizes the rules about board and lodging as income. An employe has no taxed income if he gets them where he works—provided they are given to him for the convenience of the employer. It makes no difference whether you intend the meals or lodging as part of the pay to the workers. The only condition is that they are furnished on the premises, and that workers have to take them as a condition of employment.

Salesmens' Expenses— Transportation Costs

The law now allows for the deduction from gross income of local transportation costs and the business expenses of outside salesmen. It used to be that employes had to give up the standard deduction to get many of these expenses. Or, if they used the standard deduction, they lost the actual expense items.

With the new changes you may want to think about giving definite authorizations to your employes to make certain outlays for local transportation costs and sales expenses. That way they get support for the validity of their deductions, AND it costs you nothing.

This is what the law says now: An outside salesman no longer has to prove that he is an independent contractor. Even if he is an employe, he is considered a contractor for tax purposes. That means all expenses connected with his job are deducted from gross income to find adjusted gross income. In other words, he can use the standard deduction and still deduct for all travel expenses away from home, plus entertainment costs, secretarial help, telephone, telegraph, and the like.

On local transportation costs, an employe can now deduct what he spends from gross income to find his adjusted gross income. This means he can write off cab fares and tips, bus fares, subway fares, and automobile costs. Of course, these deductions are limited to the costs that are necessary in his job. Commutation costs are not deductible.

Social Security Expanded Too

In addition to the employe benefits that Congress packed into the new tax law, the Administration this year has put through an expanded Social Security Act. Benefits have been increased, and coverage broadened. Don't overlook their value to employe morale.

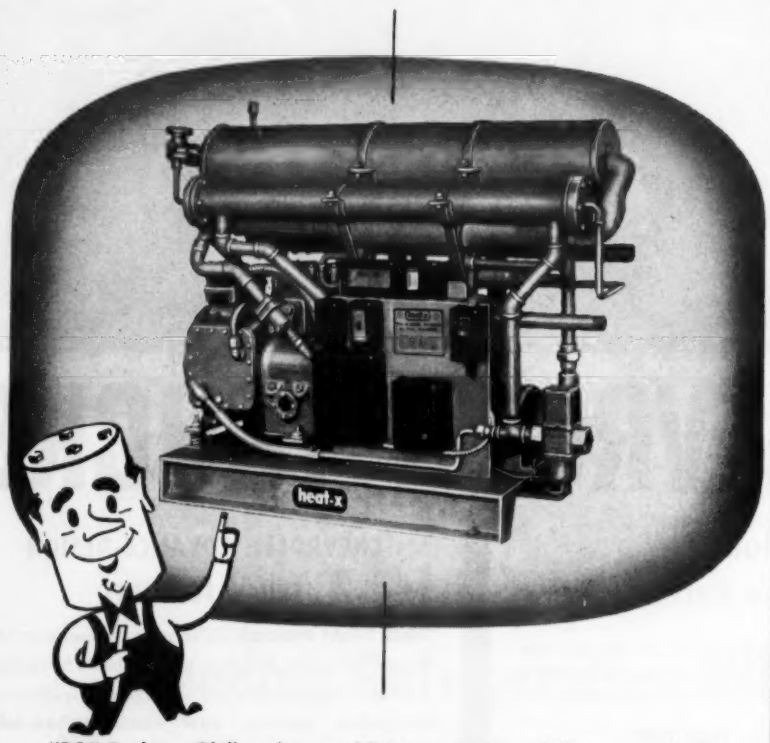
Here are two examples of what the new Social Security amendments mean in dollars and cents:

Assume a man dies at 40, leaving a wife and two children, aged one and four. If he has been earning an average monthly wage of $350 or more, his family could receive over the years a total of

(Concluded on next page)

THE NEWEST MEMBER OF THE EXPANDING heat-x LINE ..

'PC' PACKAGE CHILLERS



"PC" Package Chillers, latest addition to the Heat-X line, are entirely self-contained . . . delivered completely wired and charged with Freon-12 . . . ready for plug-in operation.

All refrigerant passages are of INNER-FIN construction . . . a patented Heat-X exclusive . . . permitting compactness of design, efficiency of operation impossible with old style construction of other chillers.

These reliable, economical Heat-X Package Chillers, available in 2 HP. through 15 HP. models, are ideal for chilled water air conditioning systems, drinking water or beverage cooling applications, industrial water cooling uses.

HEAT-X-CHANGER CO., INC.
BREWSTER • NEW YORK

CAPACITY AVAILABLE NOW FOR CUSTOM DESIGNED PARTS!

General offers a completely custom designed and produced line of rubber and plastic components for air conditioning and refrigerating equipment. These are all parts you can count on . . . precision engineered with careful quality control at every phase of manufacture.

We're ready to team up with you on gasketing, seals, die-cut and molded parts, Silentbloc vibration mounts, and hundreds of other rubber, plastic and metal components.

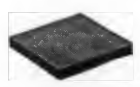
Fill out the attached coupon for more information or for a call from our representative.

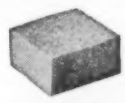
MOLDED RUBBER

EXTRUDED PLASTICS AND RUBBER

DIE-CUT RUBBER

SILENTBLOC VIBRATION MOUNTS


SHEET AND DIE-CUT SPONGE RUBBER


SYNTHETIC FOAM INSULATION

"From Plans to Products in Plastics and Rubber"

THE GENERAL TIRE
Industrial Products Division
WABASH, INDIANA

The General Tire & Rubber Company
Industrial Products Division
Wabash, Indiana

☐ Send literature on your line of parts for refrigeration and air conditioning
☐ Have your representative contact us

Name_____ Company_____

Street_____ City_____ State_____

AR-9-54

New Tax Law--

(Concluded from preceding page)

$57,042 — tax free — from the government.

It breaks down like this: Until the younger child is 18, the widow gets $15,530, the younger child $13,430. The older child gets a total of $10,500 over the years until he is 18.

After the younger child reaches 18, there is a cut-off in benefits to the widow. However, when she reaches 65, she again gets Social Security benefits. On the basis of her life expectancy at age 65 (according to the 1937 Standard Insurance Annuity Table) she will get a total of $17,582.

Even a retired childless couple —or a couple with no child under 18—can do better than you might think. Under the new law, a retired man and his wife (over 65) might collect a total of $37,112—based on an average life expectancy at that age.

The breakdown: During the husband's life, he gets $19,532, his wife $9,766. After his death, his widow would collect $7,814 before she dies.

The annual Social Security payment received by this man and his wife thus comes down to $1,953. On its face, that doesn't look like much. But don't forget that the capital required to produce that amount each year at 4% would be $48,825.

Coleman Names McAuley Regional Sales Manager

WICHITA, Kans.—Harry C. McAuley, formerly district representative and water heater sales specialist for the Coleman Co., Inc., has been promoted to regional sales manager of the Coleman heating and air conditioning division.

He succeeds Mark Darmer who resigned recently to become Coleman department manager of Hardware Products Co. of Sterling, Ill.

McAuley's region is comprised of Illinois, central Indiana, eastern Missouri, and eastern Iowa.

The new regional manager joined Coleman in 1952.

"Typhoon is the most co-operative outfit in the business," says Carl Muno, McCarty Bros. Equipment Corp., Chicago.

TO GET ON THE MOST PROFITABLE FACTORY-DEALER TEAM IN THE BUSINESS, TIE UP WITH

TYPHOON AIR CONDITIONING

794 Union Street, Brooklyn 15, N. Y.

- COMMERCIAL AIR CONDITIONERS, 2 TO 25 TONS
- RESIDENTIAL YEAR-ROUND UNITS FOR GAS OR OIL
- ROOM AIR CONDITIONERS, ½, ⅔, ¾, 1 H.P.
- PACKAGED HEAT PUMPS, RESIDENTIAL & COMMERCIAL

They Come to **New York** from everywhere

to enjoy the Value, Comfort and Convenience of the

HOTEL **Woodward**

BROADWAY at 55th STREET

Ideal accommodations for 800 guests

Private baths, showers and radio. Television!

FROM $3.50 SINGLE $5.00 DOUBLE

Electronic Controls Heating, Cooling for Three Home Builders

MINNEAPOLIS—The first use by major home developments of an electronic system to control both heating in winter and cooling in summer has been reported by the Minneapolis-Honeywell Regulator Co.

The new system, initially introduced to control home heating (some 50,000 homes will have adopted it by the year's end) has also been applied to control of cooling in home projects in St. Louis, Philadelphia, and West Hartford, Conn.

In St. Louis, builder Melvin H. Glick is incorporating the electronic units in a 1,000-home community; in Philadelphia, builder Ralph Bodek announced plans to feature the units in the 1,200 homes to sell at $15,000 he is building on a 600-acre development; and in West Hartford, builders Louis and Henry Beckenstein are building the control system into 64 split-level and ranch-type homes they are constructing.

The new system, explains Eldon E. Richardson, home market manager for Honeywell, uses two electronic thermostats, one of which is mounted outside the house, and an electronic "brain" or relay amplifier which automatically computes the heating, or cooling, needed to satisfy the signals from the two thermostats—especially the outer one which keeps tabs on the weather.

The thermostats themselves are 100 times more sensitive to temperature change than the human body.

Sterling Air Conditioning Names Simpson Vice Pres.

GASTONIA, N. C.—Roger McArver, executive vice president of Sterling Air Conditioning Corp. here, has announced the appointment of Walter W. Simpson as vice president - operations, in charge of engineering and production.

W. W. Simpson

Simpson spent 23 years with Servel before joining Sterling. He will take complete charge of Sterling's "Twin Zone" development, which employs an air-cooled system to cool the occupied areas of a home—the bedrooms at night and living and dining rooms during the day.

Modine Appoints Three New Sales Representatives In Iowa, Indiana, Oklahoma

RACINE, Wis. — The Modine Mfg. Co. has appointed three new sales representatives for its heating and cooling products, according to Owen Desmond, Heating Div. sales manager.

The Gibson-Townsend Co. will handle the complete Modine heating and air conditioning line in the Des Moines territory.

A. N. Dunn, a former plant engineer and manager with a wide experience as a sales representative, was appointed representative in South Bend, Ind.

Tom E. Krieg became a sales representative for the Modine gas unit heater line in the Tulsa, Okla. territory.

Cool-Headed Fred

SYRACUSE, N. Y.—A new air conditioned store is being erected at 138 S. Salina St. for Fred's Hat Shop. S. Elmer Chambers is architect for the new building.

Affiliated Gas Equipment Earnings Up, Sales Down

CLEVELAND — Despite lower total sales during both the first half of 1954 and the June quarter, net earnings of Affiliated Gas Equipment, Inc., showed gains over the corresponding periods last year, it was announced by Lyle C. Harvey, president.

Sales totals were adversely affected by a decline in defense business, and a six-week strike at the company's west coast plant, Harvey said.

Consolidated net sales during the quarter ended June 30, 1954, amounted to $12,082,354 as compared with $16,311,032 in the corresponding period last year.

Net earnings (unaudited), after provision for estimated Federal taxes, amounted to $491,198, or 37 cents a share, during the second quarter. During the corresponding quarter of 1953, based on the higher estimated tax rates in use, net earnings amounted to $350,361 or 27 cents per common share.

During the first six months of 1954, consolidated net sales amounted to $24,295,162 as compared with $31,061,718, in the like period last year. Net earnings amounted to $796,885, or 60 cents per common share, as compared with $736,851 or 56 cents per share in the corresponding period last year.

Residential Air Conditioning

Air Conditioning Instruction Requested At Coleman School, Year-Round Preferred

WICHITA, Kans. — More than 50% of registrants in the Coleman Co.'s dealer training program this year asked for special training in year-round air conditioning rather than in heating alone, C. L. Burrows, sales vice president, announced recently.

An innovation of the 1954 Coleman schools was the option given dealers of specialized work in either year-round air conditioning or heating. A majority chose the former.

Burrows said that the air conditioning classes were attended by a substantial number of dealers from northern states, indicating increased interest in that section of the country.

Burrows pointed out that more than half of this year's dealer-trainees asked for special instruction in selling, installing, and servicing gas-fired equipment. He also noted increasing interest in forced warm air heating by wet heat specialists.

More than 5,000 Coleman dealers have participated in this training program over the past four years, he said. This year, more than 1,000 dealers, in groups of 40 to 60, were brought to Wichita for five days of factory training.

Directing this year's program were R. J. Waalkes, on leave from the school of engineering at Michigan State college, and Ed. G. Johnson, sales training manager. Dean W. A. Nielander of the school of business and industry at Wichita university also assisted.

Leigh Heads Thatcher's New Summer Air Conditioning Div.

GARWOOD, N. J.—Appointment of Stuart B. Leigh as manager of its newly-created Summer Air Conditioning Div. has been announced by Thatcher Furnace Co. here.

Leigh has been associated with Thatcher since 1947 in various sales positions, including Pennsylvania sales representative and New England district manager.

U.S. Self-Contained Air Conditioners

Versatile, new U.S. Self-Contained Air Conditioner cools, heats, ventilates, filters, circulates, dehumidifies! Installed quickly, simply, anywhere—no ducts required. Made in three sections, complete unit can be handled in passenger-type elevators and carried in a small truck. Adjustable grilles, replaceable filters. Available in 2-, 3-, 5-, 8-, 11-, and 15-ton sizes for automatic operation in new or old stores, offices, showrooms, restaurants, etc.

U.S. Air Conditioners — for chilled water systems

New U.S. Air Conditioners use same piping for heating and cooling. Connect water chiller to boiler system and add these U.S. free-standing floor models. Each has its own filter, silent blower and automatic or manual control. The turn of a valve brings heating or cooling. Many capacities available—a size for every cooling load. Suspended models require no floor space—install above any closet or false ceiling.

U.S. Air Conditioners — for forced air systems

It's simple to add a U.S. cooling unit to present heating ducts. It takes little space, yet circulates cool, dehumidified air throughout home or business building. Furnace fan draws air through filter. For winter warmth, merely turn damper! Also available: new U.S. suspended model which hangs in basement or crawl space, or stands on attic floor. Cooling coils install right in present ductwork. Both models come in several sizes.

Air conditioning news from U.S. Radiator

U.S. Window Air Conditioners

Require no plumbing, are compact and easy to handle for quick, easy installation. They cool, dehumidify, filter. Thermostat (optional) keeps operating cost low, permits desired temperature settings. 5-year warranty.

U.S. Sash-window model (left) can be used as air conditioner or ventilating fan—fresh air or exhaust. Hinged panel conceals fingertip controls. Double-baked enamel finish harmonizes with any room color. 4-way louvers. Three sizes—½-, ¾- and 1-ton.

U.S. Casement-window model (right) requires only one-square foot of window space. Condensing unit hangs outdoors, evaporating unit hangs indoors—no openings to let in street noises. Ideal for multiple dwellings.

Here's U.S. Radiator's complete new line of air conditioners. Each is compactly designed to do its specific job . . . to save installation time and expense . . . to provide comfort cooling at lowest operating cost.

It's easy to do business with U.S. . . . easy to get the right equipment and the right assistance. U.S. Radiator air conditioning experts are located throughout the United States. For the name of the one nearest you, or for further information on the U.S. air conditioning line—write today!

Watch for news from "Air Conditioned Village"

U.S. Radiator is proud that its equipment has been selected for testing at "Air Conditioned Village," Austin, Texas. Watch for the results!

UNITED STATES RADIATOR CORPORATION

OVER HALF A CENTURY A GREAT NAME IN HEATING

GENERAL OFFICES • DETROIT 31, MICHIGAN

UNITED STATES RADIATOR CORPORATION: Boilers, Radiators, Heating Accessories • Pacific Boilers • Cyclotherm Steam Generators • Metal Products • Dreyer-Hanson Air Conditioning and Commercial Refrigeration

SLANTS on Service

Dope the Oil Plug

"Immediately upon removing the oil plug on a compressor body, I always put 'Tite Seal' or pipe dope on the plug," reports Al Dalpiaz of Dennison, Ohio.

Upon filling the compressor body with oil, the plug is installed so no oil has a chance to splash out.

"A lot of oil can run out on the floor while you are looking for something in your toolbox to dope the plug."

J. H. Cowan Appointed Kenco Sales Manager

LORAIN, Ohio — Joseph H. Cowan has been promoted to sales manager of Kenco, Inc., manufacturer of submersible pumps for sump, industrial, marine, and contractor use, the company announced recently.

He will head up all activities relating to sales, advertising, and sales promotion.

Cowan joined the Kenco sales department in March of 1951. He was recalled to active Naval duty in November, 1951, and returned to Kenco in December, 1953, to resume his sales activities.

Phillips-Moore Company To Represent Kennard In Southwestern Area

ST. LOUIS — Phillips-Moore Equipment Co., El Paso, Texas, has taken over representation of the Kennard Engineering line for New Mexico and part of southwestern Texas.

The company is composed of A. Y. Phillips and Chas. E. Moore. Both have had many years of experience in air conditioning sales and installation. Moore is a graduate of Texas A. & M. in mechanical engineering. Phillips is an Ohio State graduate of the School of Industrial Engineering.

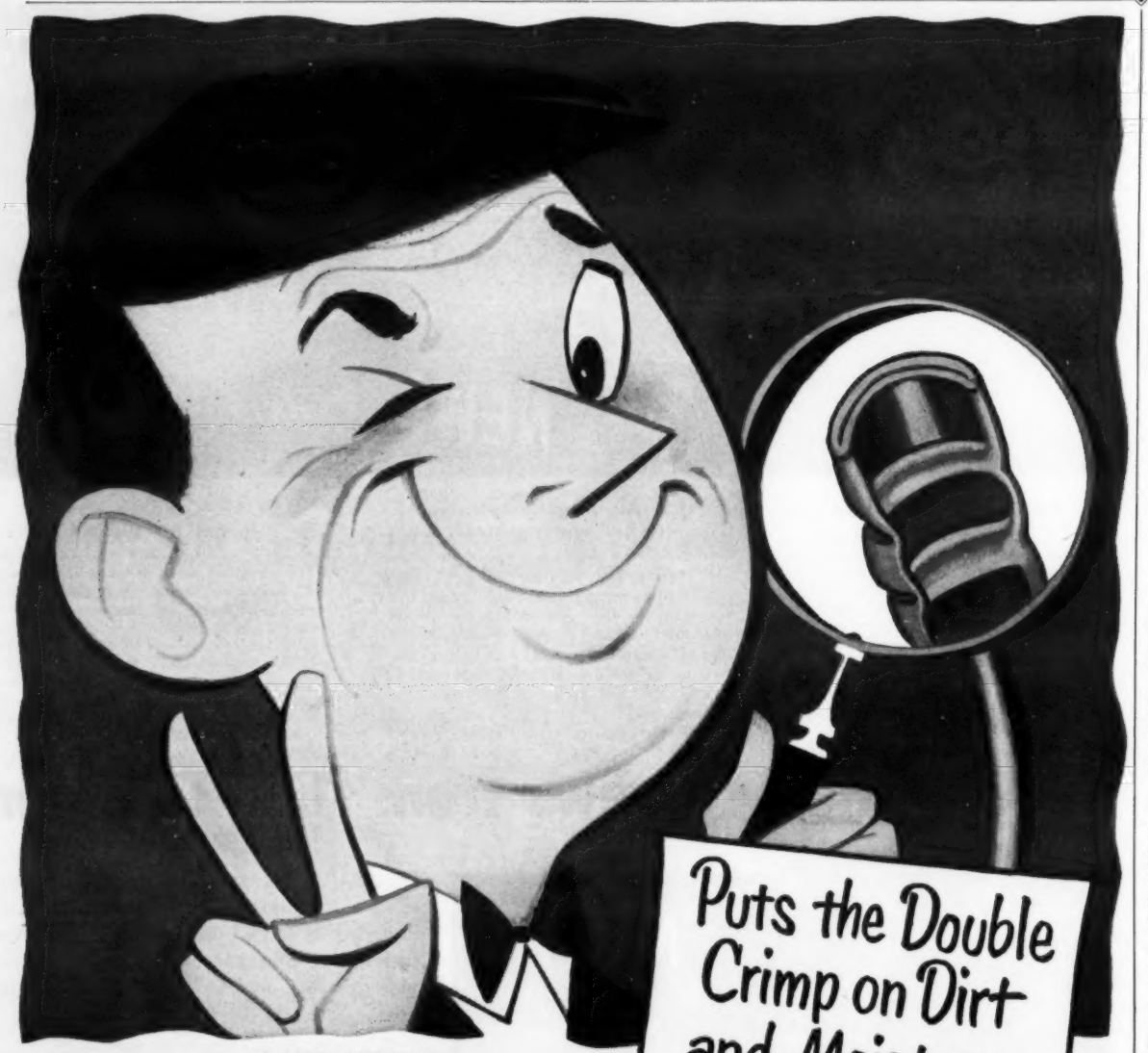
FOR ACCURATE, DEPENDABLE TEMPERATURE CONTROL SPECIFY Ranco

"TWO-TEMPERATURE" TYPE 019-1559 CONTROLS

Made right to fit right to work right in either natural or forced convection units, the Ranco Type 019-1559 provides better protection for perishables, helping to prevent drying out, shrinkage and spoilage.

This control assures uniform fixture temperatures and uniform high relative humidity. Defrosting of the coil is completely automatic, regardless of weather or load conditions, or cold location of the compressor. The Ranco Type 019-1559 automatically changes its differential to suit the load of each running cycle.

Ranco Inc.
COLUMBUS 1, OHIO
WORLD'S LARGEST MANUFACTURER OF REFRIGERATION CONTROLS



REVERE

DRYSEAL

COPPER REFRIGERATION TUBE

Not one but two crimps are made in each end of DRYSEAL. This is the final step in manufacturing, that immediately follows a special cleaning and dehydrating operation, which keeps dirt and moisture from entering the tube.

The seal is made in such a way that the diameter of the tube does not change, which permits DRYSEAL to be passed through any opening large enough for the tube itself.

As for bendability—the soft temper of the copper used in DRYSEAL allows you to make the most intricate bends by hand. And its ductility and soft temper make it extremely easy to flare for compression fittings without danger of splitting. Economical tube sizes range from ⅛" to ¾" O.D.

In addition, the DRYSEAL carton has been attractively designed for easy identification in stock. It contains one 50-foot coil of DRYSEAL . . . is easier to handle, light weight, economical.

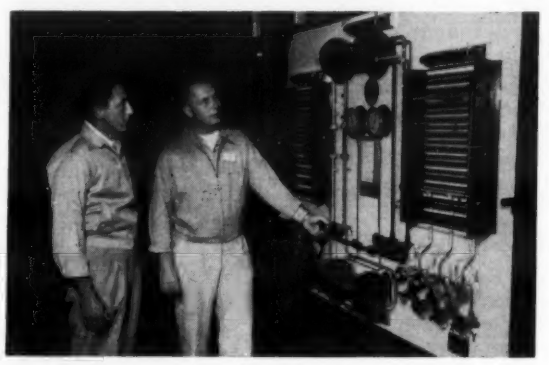
REVERE
COPPER AND BRASS INCORPORATED
Founded by Paul Revere in 1801
230 Park Avenue, New York 17, N. Y.

Mills: Baltimore, Md.; Chicago and Clinton, Ill.; Detroit, Mich.; Los Angeles and Riverside, Calif.; New Bedford, Mass.; Rome, N. Y. Sales Offices in Principal Cities, Distributors Everywhere.

SEE "MEET THE PRESS" ON NBC TELEVISION, SUNDAYS

Service & Supplies

PIPE FITTER APPRENTICE Johnnie Thomas of Jacksonville, Fla., the Florida state champion, puts the finishing touches on a welding problem during the recent international apprentice contest at Purdue university. Watching over him, and a onetime apprentice himself, is Martin Durkin, president of the United Association of Plumbers & Pipe Fitters.



Two contestants look over one of the many displays in the exhibit hall set up in conjunction with the contest. This particular exhibit demonstrates piping and fittings in a refrigeration system. Plans are being made for a special "refrigeration division" in the next apprentice contest.

Pipe Fitting Apprentice Contestants Hear UA Head Tell Need of Men in Cooling Field

LAFAYETTE, Ind.—Seventy young men recently took part in an international apprentice contest conducted at Purdue university by the United Association of Plumbers & Pipe Fitters.

While 400 union officials and representatives of the industry gathered for the opening session of the three-day contest and subsequent discussions on apprentice training, related classroom instruction, and on-the-job skills, the 70 plumber and pipe fitter apprentices began a series of written and performance tests.

The apprentices—the cream of the crop from 35 states, the District of Columbia, and three provinces of Canada—competed for $3,500 in cash and the "championship of the world." Awards were $1,000 for first, $500 for second, and $250 for third for the best plumber and the best pipe fitter.

In the plumber class, Freeman M. Kincaid of Local 78, Los Angeles, placed first; Gerald Lee Fisher, Local 32, Seattle, second; and Joseph V. Bellgraph, Local 70, Grand Rapids, Mich., third.

Winners in the pipe fitter division were Robert Berns, Local 601, Milwaukee; Jack Allman, Local 32, Seattle; and Donald Ben Roberts, Local 597, Chicago.

Judges for the contest were R. S. Green, executive director of the experimental station, Ohio State university; Elmer Lundquist, professor of engineering, University of Iowa; H. D. Bearden, vice-director, Texas Engineering Extension Service, Texas A. & M. college system; Paul W. Case, manufacturing processes department, Purdue; and Ray T. Hamilton, superintendent of the Purdue physical plant.

Contest winners received their awards from Martin P. Durkin, UA general president, at a banquet.

Later, Durkin pointed out that chances for employment are wide open for young men who want to become trained craftsmen in the plumbing and pipe fitting fields.

He stated that the need for skilled tradesmen will expand greatly over the next few years due to the need for piping in many new kinds of manufacturing processes and industrial installations. He also cited the lines of refrigeration and air conditioning as growing, requiring more and more trained men.

Durkin estimated that the apprentice program now being accelerated by the United Association would be geared to possibly the addition of about 10,000 new apprentices over the next 18 months.

"We definitely feel that qualified young men have a great future in the plumbing and pipe fitting trades," he said.

FILTRINE "Taste-Master" PURIFIER

Stop service calls . . . keep out rust and sludge . . . open new doors to sales acceptance!—with coolers, ice-makers, sell "Taste-Master"!—checks chlorine, traps sediment; promotes service-free satisfaction with all water processing appliances. Write—

Filtrine MANUFACTURING CO. BROOKLYN 38 • N. Y.
"Water Coolers and Filters for 40 Years"

Some Comparisons 1953-1948 and 1953-1952 on Cooling Equipment Distributors' Operations

(Preliminary)

AIR CONDITIONING; COMMERCIAL REFRIGERATION EQUIPMENT DISTRIBUTORS

TABLE 1—ESTABLISHMENTS, SALES, RECEIVABLES, BAD DEBT LOSSES, EXPENSES, AND STOCKS, UNITED STATES: 1953 and 1948

Item	1953	1948
Number of establishments	1,998	1,409
Sales, entire year (millions of dollars)	$775	$310
Operating expenses:		
Amount (millions of dollars)	$138	$73
Per cent of sales	18.3	23.4
End-of-year receivables, per cent of annual sales*	12.1	†12.7
Bad debt losses, per cent of sales*	0.40	†0.43
Credit sales, per cent of total sales*	92.1	†84.0
End-of-year stocks, valued at cost:		
Amount (millions of dollars)	$118	$48
Per cent of annual sales	15.6	15.5

*Limited to establishments doing a credit business.

†Includes data for establishments without paid employes.

TABLE 2—PER CENT CHANGE IN SALES: 1953 FROM 1952, BY GEOGRAPHIC DIVISION

Geographic Division	Per Cent Change In Sales, 1953 from 1952	Geographic Division	Per Cent Change In Sales, 1953 from 1952
United States	+ 8.5	South Atlantic	+ 6.9
New England	0.0	East South Central	+ 6.4
Middle Atlantic	+13.1	West South Central	+14.8
East North Central	+ 5.2	Mountain	*
West North Central	+12.9	Pacific	+ 6.8

*Withheld because of high sampling variability.

States comprising geographic divisions:

New England (Conn., Maine, Mass., N. H., R. I., Vt.)
Middle Atlantic (N. J., N. Y., Pa.)
East North Central (Ill., Ind., Mich., Ohio, Wis.)
West North Central (Iowa, Kan., Minn., Mo., Neb., N. Dak., S. Dak.)
South Atlantic (Del., D. C., Fla., Ga., Md., N. C., S. C., Va., W. Va.)
East South Central (Ala., Ky., Miss., Tenn.)
West South Central (Ark., La., Okla., Texas)
Mountain (Ariz., Colo., Idaho, Mont., Nev., N. Mex., Utah, Wyo.)
Pacific (Calif., Ore., Wash.)

Census Study--

(Concluded from Page 1, Col. 3)

eration equipment and supplies and 1,998 at the end of 1953.

Included in this count are merchant wholesale establishments primarily engaged in selling commercial refrigeration equipment such as refrigerators, display cases, dispensers, water coolers, food locker equipment; and those selling air conditioning and ventilating equipment and supplies including fans, blowers, and accessories.

Establishments specializing in the sale of refrigeration components and accessories are also included.

The 1953 data is based on sample reporting and represents all sizes of firms except those without paid employes, all forms of ownership and organization, and all parts of continental United States.

The census bureau's preliminary report also noted that as the total volume of sales increased relatively more than the number of establishments between 1948 and 1953, annual sales per establishment increased considerably.

Operating expenses, including payroll but not the cost of merchandise, totaled $138 million in 1953 or 18.3% of sales. This expense ratio represented a decrease from the 23.4% in 1948.

Accounts and notes receivable derived from credit sales amounted to $88 million at the end of 1953, or 12.1% of the 1953 sales of those doing a credit business.

Bad debt losses — receivables written off as uncollectible—during 1953 amounted to 0.4% of sales, or 40 cents per $100 of sales of distributors doing a credit business. This ratio was lower than in 1948 when bad debt losses amounted to 43 cents per $100 of sales.

End of 1953 stocks were valued, at cost, at $118 million, or 15.6% of annual sales.

The census bureau said that the 1953 annual wholesale trade survey was the first of its kind conducted by the bureau. A more complete report of the findings will be published in a census bulletin.

FRICK Air Conditioning

INSTALLED AT FAIRCHILD AIRCRAFT

Frick Company recently completed the engineering and installation of a year 'round comfort air conditioning system for the new office annex of the Fairchild Aircraft plant in Hagerstown, Md., where they manufacture their famous C-119 Flying Boxcars.

The cooling load of 245 tons of refrigeration is carried by two Frick "ECLIPSE" 9-cylinder high-speed compressors.

For the latest in air conditioning and refrigeration engineering and equipment, look to Frick Company, now in its second century of service to business and industry.

DEPENDABLE REFRIGERATION SINCE 1882
FRICK CO.
WAYNESBORO, PENNA. U.S.A.

Government Contracts

PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing officer under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date.

DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
Galveston District, Corps of Engineers, P.O. Box 1229, Galveston, Texas			
Const. of chapel, 300 seats Randolph AFB, San Antonio, Tex., work to consist of const. chapel of wood and steel frame—approx. 8,710 sq. ft. floor area, conc. pier foundation, masonry w/ stucco exterior walls, heating and air conditioning, outside utilities included.	Job	Eng-41-243-55-22-B	30 Sep 54
Alteration to USAR center Houston, Tex., alteration to be made inside USAR Armory and vehicle storage bldg., work to include new partitions, new electrical work and new mechanical work including air conditioning.	Job	Eng-41-243-55-22-B	29 Sep 54
General Stores Supply Office, 700 Robbins Ave., Philadelphia 11, Pennsylvania			
Fan bracket two-speed	1684 ea.	155-195-55 B	1 Oct 54
Fan refrigeration space non-portable non-oscillating direct drive guarded high impact shock resistant Mil Spec Mil F 151B.	385 ea.	155-195-55 B	1 Oct 54
Fan refrigeration space non-portable non-oscillating direct drive guarded high impact shock resistant Mil Spec Mil F 68C (ships) amend 8.			

GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
General Services Administration, Business Service Center, Region 3, 7th and D Sts., S.W., Washington 25, D. C.			
3-Ton Cooling Tower and Air Conditioners.	1 ea.	(4H-49021-R)	28 Sep 54
Diffusers.	72 ea.	(4H-49021-R)	28 Sep 54
Business Service Center, General Services Administration, Region 111, 7th and D Sts., S.W., Washington 25, D. C.			
5 ton ice plants.	2 ea.	4N-34613-G RR	30 Sep 54

CONTRACTS AWARDED THROUGH SEPT. 7

Corps of Engineers, U. S. Army, Office of the District Engineer, Wilmington District, 308 Customhouse, Wilmington, N. C.
Re-Design of Standard Drawings to Provide Complete Air Conditioning of 500-1000 Bed Hospital, Ft. Bragg, N. C.—Job, $34,500.—J. N. Pease & Co., Charlotte, N. C.

New Service Clinic--

(Concluded from Page 1, Col. 5)

Visitors may come as late as 3 p.m. and still take part in two meetings, the committee points out.

Following the technical meetings there will be a smorgasbord dinner.

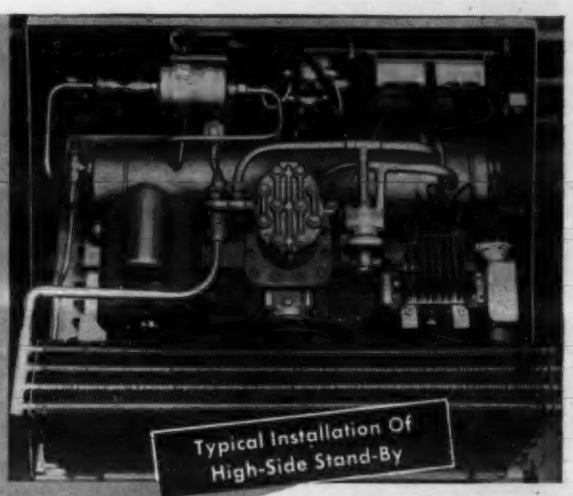
The next such clinics are scheduled for Lansing, Mich., in November; Grand Rapids in January. Exact dates and places will be announced in the near future.

FTC Dairy Hearing--

(Concluded from Page 1, Col. 4)

Attorney Scott notified him of the change in locale. The hearing will be on Sept. 14 as originally scheduled.

Complaints expected to be lodged against the dairy include the charge that Borden gave away refrigeration equipment to its customers, an unfair trade practice affecting refrigeration equipment contractors.



New PACKAGED Systems Simplify TRUCK INSTALLATION

These new Lehigh TWO-COMPRESSOR SYSTEMS, now available through factory trained and fully qualified distributors, take fifty percent of the labor and guess-work out of the installation of truck refrigerating equipment. Not only are they much more compact than older models, but once installed they give much more room for servicing with all parts easily accessible. Controls, too, have been greatly simplified. Each "package" now contains every needed component and accessory for installation. Included are such important items as mounting brackets, wire clips, cord hangers, mounting screws and bolts, etc. Thousands of these fine Lehigh systems are now in use. Basic quality is unchanged. Only the package has been improved — for your greater convenience! We'll be glad to send you data sheets.

Also available: REMOTE TYPE TRUCK UNITS
PLATE TYPE SYSTEMS • SINGLE COMPRESSOR SYSTEMS
Write for catalog and name of your nearest distributor

TWO-COMPRESSOR SYSTEMS
For ON-THE-ROAD and STAND-BY SERVICE
A Complete, Ready-To-Install Package

Lehigh BLU-COLD COMMERCIAL REFRIGERATION
Export Dept. 13 E. 40th St., N. Y.

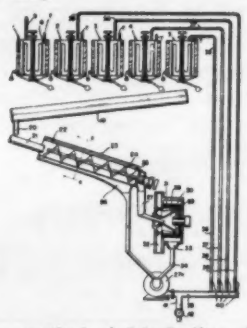
Lehigh BLU-COLD
CONDENSING UNITS AND SYSTEMS
LEHIGH MANUFACTURING COMPANY
Lancaster, Pa.
DIVISION OF LEHIGH FOUNDRIES, INC.

Manufacturers of Malleable and Grey Iron Castings, Refrigerating Equipment, Air Valves, Automatic Vending Machines

PATENTS

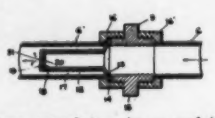
Week of April 27 (Concluded)

2,676,469. METHOD AND APPARATUS FOR DEHYDRATION OF LIQUIDS BY FREEZING. Elwood Paul Wenzelberger, Dayton, Ohio, assignor to The Commonwealth Engineering Co. of Ohio, Dayton, Ohio, a corporation of Ohio. Application Nov. 20, 1950, Serial No. 196,685. 9 Claims. (Cl. 62—124.)



1. In a method of dehydration of solid bearing liquids, freezing the water in said liquid in a freezing tank wherein said liquid is subjected to a series of successive freezing treatments at progressively lower temperatures, the steps comprising, converting the solid bearing liquid and resulting ice into a slush, maintaining the slush in a continuous state of fluid agitation in the tank; dumping the full contents of the tank, conveying the dumped contents of the tank over a stationary screen to separate the major portion of the liquid bearing the solids from the ice with the ice being agitated during the separation of a portion of the entrained liquid bearing solids, and returning at least a portion of the resultant treated liquor to the cycle of freezing dehydration treatment to produce a product having the desired water content.

2,676,470. FLOW REGULATOR IN A REFRIGERATING SYSTEM. Alquin J. Streitz, Denver, Colo. Application April 24, 1950, Serial No. 157,749. 9 Claims. (Cl. 62—127.)



1. A flow regulator in a refrigerating system including a compressor, a condenser, a receiver and an evaporator all connected in closed cycle relation by conduit, said flow regulator being in the conduit between the evaporator and the receiver and including an orifice insert member, said last-named member comprising an elongated tube with a cross sectional area less than that of the conduit, and an orifice plate in the tube.

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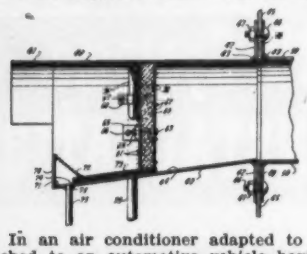
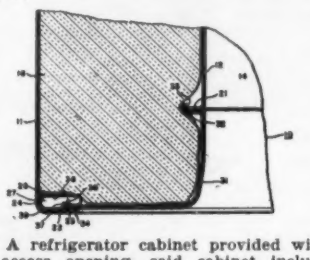


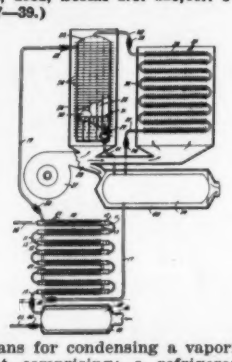
1. In an air conditioner adapted to be attached to an automotive vehicle having a ventilation duct thereon; a water container; an air scoop adapted to be positioned on the outer end of said ventilation duct; an evaporator pad positioned across said scoop; a water delivery duct arranged above said pad and adapted to deposit water on said pad; a water circulator in said container; power means to operate said water circulator; a conduit extending from said circulator to said delivery duct; a return duct extending from said scoop to said container; a duct positioned in said scoop and providing communication between the area behind the evaporator pad and the area of the return conduit outlet whereby unevaporated water returning to said return conduit from behind the evaporator pad may be isolated from the incoming pressure of air entering the air scoop; and a lip extending across the lower front end of said scoop, whereby the area of the return conduit outlet is baffled from the pressure of incoming air.

2,676,727. REFRIGERATING APPARATUS. James W. Jacobs and Keith K. Kesling, Dayton, Ohio, assignors to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application July 23, 1952, Serial No. 300,437. 5 Claims. (Cl. 220—9.)



1. A refrigerator cabinet provided with an access opening, said cabinet including inner and outer sheet metal wall members having spaced edges in the vicinity of the access opening, a non-metallic breaker strip bridging the space between the edges of said wall members, the metal at the edge of said inner wall member being bent to provide a hook-like attaching portion therealong, the metal adjacent the edge of said outer wall member being bent to form opposed walls of a groove therealong, said breaker strip having a hook-like attaching edge fitting over and being interlocked with the hook-like attaching edge portion of said inner wall member, the other edge of said breaker strip having a bead thereon and extending into the groove along the edge of said outer wall member, resilient means for securing the beaded edge of said breaker strip to the edge of said outer wall member, said resilient means comprising a spring clip having ends engaging opposed sides of the bead on said breaker strip and having other portions compressed between the opposed walls of said groove, and said spring clip having a part thereof engaging and biasing a portion of said breaker strip adjacent said bead thereon into abutment with one of the opposed walls of said groove.

2,676,791. WATERLESS CONDENSING SYSTEM FOR REFRIGERANTS. John A. White, near Golden, Colo. Application Feb. 12, 1951, Serial No. 210,447. 3 Claims. (Cl. 257—39.)



1. Means for condensing a vaporized refrigerant comprising: a refrigerant condenser including a tube having a vaporized refrigerant receiving end and a condensed refrigerant discharge end, a jacket surrounding the major portion of the tube open from one end to the other, a conduit for conducting a liquid cooling medium into the end of said jacket adjacent the condensed refrigerant end of said tube, a conduit for conducting said cooling medium in a vapor form from the end of said jacket adjacent the vaporized refrigerant receiving end of the tube, first and second cooling medium vapor condensers with the first of which said last conduit is in communication, a conduit in communication with said first and second condensers, said first and second condensers each including an air jacket, a liquid cooling medium receiver with which said first conduit is in communication, a drain pipe at the lower end of each of said first and second condensers in communication with said liquid cooling medium receiver, a jacket surrounding said receiver, and means for forcing air through each of the jackets of said first and second condensers and said liquid cooling medium receiver.

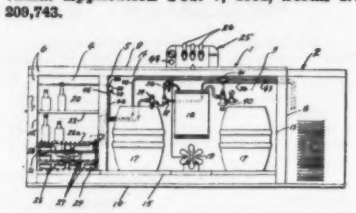
AVAILABLE FOR LICENSING OR SALE

Amana Refrigeration, Inc., offers the following patent for non-exclusive licensing on reasonable terms. Applications for licensing may be addressed to: Director of Engineering, Amana Refrigeration, Inc., Amana, Iowa.

Pat. 2,622,911. Refrigerator Cabinet Latch Strike. Patented Dec. 23, 1952. Refrigerator cabinet latch strike having completely concealed mounting means for adjustment horizontally and inwardly and outwardly so that it will always be in proper alignment with the door to provide a tight seal. The exposed portion of the latch strike, which is especially pleasing in appearance, comprises a tubular shank forming a hook for cooperation with a latch mechanism imbedded in the door. A locking screw with an exterior head extends through the tubular shank and engages the concealed mounting means to lock the latch strike in position after it is properly adjusted. Group 35—84. Reg. No. 53,142.

Week of May 4

2,677,241. REFRIGERATION EQUIPMENT FOR BEER COOLING AND ICE-CUBE MAKING. Carl John Schmock, Erie, Pa., assignor to The Uniflow Mfg. Co., Erie, Pa., a corporation of Pennsylvania. Application Feb. 7, 1951, Serial No. 209,743.

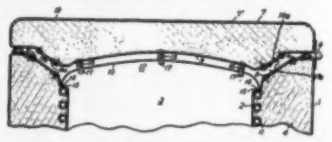


1. Refrigeration equipment comprising, in combination with a compressor unit and a relatively large refrigerating chamber adapted to receive barreled beverages and having an evaporator therein, a relatively small refrigerating chamber divided into upper and lower compartments with shelving for support of bottled beverages in the upper compartment, an evaporator in the lower compartment comprising a coil bent to provide a multiplicity of runs positioned to define shelving for supporting containers for the freezing of water, this last shelving serving also to define at least one boundary of a horizontally extending air circulation passage, partition structure extending upwardly from one end of said passage to define an upright air circulation duct the upper end of which is open to the upper portion of the upper compartment, a lower portion of the upper compartment being in communication with the other end of said horizontal passage, an air circulation fan adjacent one end of said passage for circulating air through said passage in contact with said evaporator coil and thence upwardly through said duct and into the upper portion of the upper compartment to be returned to the said passage, the evaporators in the large and small refrigerating chambers both being connected with said compressor unit, and independently operating temperature controlling systems for the large and small chambers including for the small chamber a temperature responsive device in this chamber located in the upper compartment thereof and connected to regulate the operation of the air circulation fan.

2,677,242. SECONDARY REFRIGERATION CONTROL SYSTEM. Charles S. Grimshaw, Erie, Pa., assignor to General Electric Co., a corporation of New York. Application Jan. 31, 1952, Serial No. 269,259.

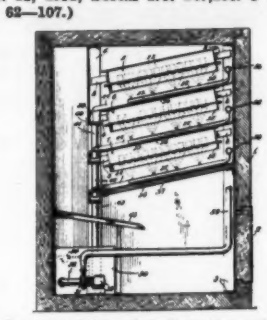
1. In a secondary refrigerating system including an evaporator and a condenser, means for controlling the flow of refrigerant in said system and thereby controlling the temperature of said evaporator comprising a refrigerant reservoir, a tube to said evaporator being arranged to drain liquid refrigerant from said reservoir, a tube from said evaporator extending into said reservoir and effective for returning vaporous refrigerant and liquid thereto, a tube to said condenser being arranged to receive vaporous refrigerant from said reservoir, a tube from said condenser being arranged to conduct condensed refrigerant to said reservoir, said tubes to and from said condenser extending into said reservoir, a receptacle in said reservoir cooperating with said tubes to and from said condenser, said receptacle being adapted to hold a supply of liquid refrigerant, said receptacle being movable between one and another position, said liquid refrigerant in said receptacle being effective when said receptacle is in one position for closng the ends of said tubes to and from said condenser thereby to cause said condenser to become substantially filled with an to retain condensed refrigerant whereby the operation of said condenser is discontinued and the refrigeration process is stopped, said liquid refrigerant being effective when said receptacle is in the other position for closing the end of said tube from said condenser only whereby vaporous refrigerant is admitted into said tube to said condenser and the condensed refrigerant is permitted to flow from said tube from said condenser and into said reservoir for continuing the refrigeration process, a humidity controlled device located in the vicinity of said evaporator, a solenoid associated with the receptacle and controlled by said humidity controlled device whereby low humidity about said evaporator causes said receptacle to be maintained in said one position and high humidity causes said receptacle to be moved to said other position.

2,677,247. REFRIGERATED CABINET WITH HEAT TRANSFER MEANS ON INNER LINER OF THE DOOR. William G. Spiegelhalter, Erie, Pa., assignor to General Electric Co., a corporation of New York. Application Dec. 30, 1952, Serial No. 328,727. 12 Claims. (Cl. 62—99.)



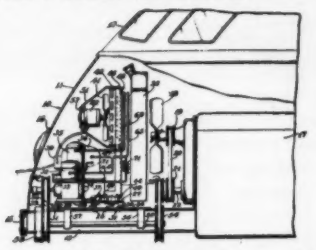
1. In a refrigerated cabinet an outer case, an inner liner spaced from said outer case and defining a food storage compartment having an access opening, a closure member hinged to said outer case and adapted to close said access opening, means secured to said inner liner for refrigerating said storage compartment, said closure member including an inner wall defining one wall of said storage compartment and disposed in spaced relationship to said liner whereby said refrigerating means does not extend entirely to the region adjacent said inner wall of said closure member, an auxiliary member of heat-conducting material mounted on said inner wall of said closure member, said auxiliary member being arranged to engage said refrigerated inner liner when said closure member is in its closed position for cooling the region of said storage compartment beyond said inner liner and adjacent said inner wall of said closure member.

2,677,249. APPARATUS FOR FORMING ICE CUBES. Hugh B. Mason, San Gabriel, Calif., assignor of one-third to Sabra E. Mason, San Gabriel, Calif. Application Sept. 18, 1951, Serial No. 247,156. 5 Claims. (Cl. 62—107.)



1. An apparatus for forming relatively small clear solid ice blocks comprising a freezing unit including a supporting frame, plates at each side thereof, an insulating material in the chamber between the plates, tubes completely embedded in said insulating material placed side by side and connected at alternate ends, means for circulating a heat transferring medium through said tubes, a series of molds associated with each tube, each mold having one end closed and the other end open, each tube having closely spaced openings shaped to conform to the molds, the side plate adjacent said tube openings having similar openings, said molds being inserted in said openings and welded to said tube with the open ends projecting from the side plate, means for supporting said freezing unit with the open ends of the molds facing downwardly, and spray pipes disposed beneath and spaced from said molds having nozzles arranged so as to direct water into each mold.

2,677,251. FRONT MOUNTED TRUCK REFRIGERATION UNIT. Adna R. Clark, Evansville, Ind., assignor to International Harvester Co., a corporation of New Jersey. Application Oct. 15, 1951, Serial No. 251,341. 9 Claims. (Cl. 62—117.1.)



1. In a refrigerated automotive vehicle having transversely spaced and longitudinally extending chassis frame members, and a water cooling radiator disposed forwardly of a driving engine in the forward portion of a vehicle, the combination, comprising: a base member disposed forwardly of the vehicle radiator and supported by the chassis frame members; refrigeration apparatus, including a first refrigerant compressor, a second and separate refrigerant compressor, a receiver tank, a condenser and fluid conducting conduits connected therebetween, supported on said base member; means, including a variable speed-ratio mechanism, for operatively connecting said first compressor with the vehicle engine for driving engagement therewith during the time of engine operation; and having said second compressor an hermetic-type unit with a self-contained electric driving motor adapted for operation, upon connection with a source of electric power supply, as a stand-by when said first compressor is inoperative.

(To Be Continued)

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YOUNG GRADUATE mechanical engineer currently holding responsible position with major manufacturer of home appliances desires to relocate. Five years' experience in design, development and production of refrigerators, freezers and room air conditioners. Prefer midwest location. Complete details furnished upon request. BOX A5040, Air Conditioning & Refrigeration News.

EXPERIENCED SERVICE manager, manufacturer level. Eighteen years' experience in the appliance business including air conditioning. Desires position with manufacturer who needs a real executive. Can formulate policies and coordinate service activity with a sound sales effort. Seeking greater opportunity, presently employed. Age 35, married. For complete resume write Box A5042, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

WANTED—EXPERIENCED air conditioning engineers, design draftsmen, sales engineers for commercial and industrial refrigeration, air conditioning and ice making equipment, by Chicago area York distributor. Call or write Al Smith at MURPHY & MILLER, INC., 1326 South Michigan Avenue, Chicago 5, Illinois—Telephone HArrison 7-8900.

DISTRIBUTOR WANTED for New York City by nationally known manufacturer of packaged air conditioners and room air conditioners. Must be well-established and have a successful history in this field. All replies strictly confidential and must be on your letterhead. BOX A5033, Air Conditioning & Refrigeration News.

DESIGN ENGINEER—engineering degree or equivalent, with experience in the control, valve, and electrical field for manufacturer of automatic refrigerant control devices located in St. Louis, Missouri. BOX A5036, Air Conditioning & Refrigeration News.

EXPERIENCED AIR conditioning engineer for inside sales and engineering with Los Angeles wholesale distributor. Excellent opportunity for right man. Give in detail, salary expected, complete past experience and enclose recent photo. BOX A5037, Air Conditioning & Refrigeration News.

WANTED—EXPERIENCED and qualified sales engineer. Industrial refrigerating and air conditioning. For engineering and contracting firm representing nationally known manufacturers equipment. Pacific northwest. $5-12,000 depending sales ability. Give complete details, education, training, references and availability. Write BOX A5041, Air Conditioning & Refrigeration News.

EQUIPMENT FOR SALE

FOR SALE: Brand New Popular Brand Supermatic -Hermetic Domes- ½ H.P. $40.00—¾ H.P. $42.50—1 H.P. $45.00. Complete with relay and capacitors. Model R 5 and 7½ H.P. Compressors $115.00. Details supplied on request. Send for refrigeration parts and supplies catalog listing many other sensational values. WALTER W. STARR REFRIGERATION, 2833 Lincoln Ave. Chicago 13, Illinois.

MISCELLANEOUS

WANTED: WATER valves, Penn, Electromatic, expansion valves, controls, driers. We'll buy your new surplus stock—large or small lots. For sale: 50 new copper room coils-formed 1⅛" O.D., 1" I.D., Dim: 2 x 3 feet each coil 30 feet-sealed, bargain. MILTON BECKER, 17-14 201 St., Bayside 60, New York.

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9-13-54

PATENTS

Week of April 27 (Concluded)

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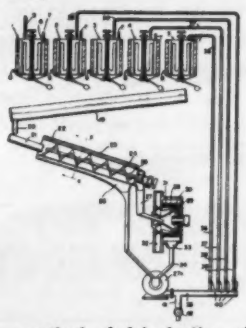

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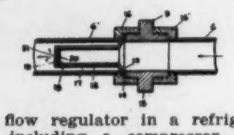

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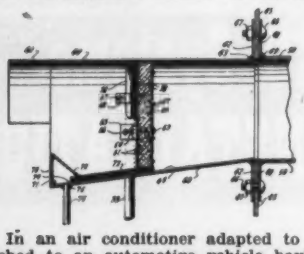
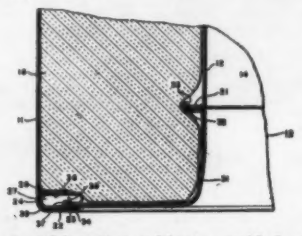
2,676,528. AIR CONDITIONER FOR AUTOMOTIVE VEHICLES. George A. McAlister, Jr., Big Spring, Texas, assignor of one-half to S. Austin Wier and Howard E. Moore. Application Jan. 3, 1950, Serial No. 136,479. 4 Claims. (Cl. 98—2.)



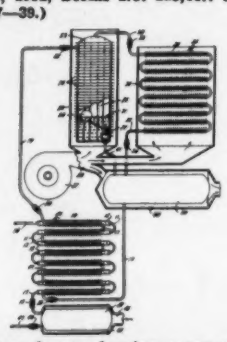
1. In an air conditioner adapted to be attached to an automotive vehicle having a ventilation duct thereon; a water container; an air scoop adapted to be positioned on the outer end of said ventilation duct; an evaporator pad positioned across said scoop; a water delivery duct arranged above said pad and adapted to deposit water on said pad; a water circulator in said container; power means to operate said water circulator; a conduit extending from said circulator to said delivery duct; a return duct extending from said scoop to said container; a duct positioned in said scoop and providing communication between the area behind the evaporator pad and the area of the return conduit outlet whereby unevaporated water returning to said return conduit from behind the evaporator pad may be isolated from the incoming pressure of air entering the air scoop; and a lip extending across the lower front end of said scoop, whereby the area of the return conduit outlet is baffled from the pressure of incoming air.

2,676,727. REFRIGERATING APPARATUS. James W. Jacobs and Keith K. Kesling, Dayton, Ohio, assignors to General Motors Corp., Dayton, Ohio, a corporation of Delaware. Application July 23, 1952, Serial No. 300,437. 5 Claims. (Cl. 220—9.)



1. A refrigerator cabinet provided with an access opening, said cabinet including inner and outer sheet metal wall members having spaced edges in the vicinity of the access opening, a non-metallic breaker strip bridging the space between the edges of said wall members, the metal at the edge of said inner wall member being bent to provide a hook-like attaching portion therealong, the metal adjacent the edge of said outer wall member being bent to form opposed walls of a groove therealong, said breaker strip having a hook-like attaching edge fitting over and being interlocked with the hook-like attaching edge portion of said inner wall member, the other edge of said breaker strip having a bead thereon and extending into the groove along the edge of said outer wall member, resilient means for securing the beaded edge of said breaker strip to the edge of said outer wall member, said resilient means comprising a spring clip having ends engaging opposed sides of the bead on said breaker strip and having other portions compressed between the opposed walls of said groove, and said spring clip having a part thereof engaging and biasing a portion of said breaker strip adjacent said bead thereon into abutment with one of the opposed walls of said groove.

2,676,791. WATERLESS CONDENSING SYSTEM FOR REFRIGERANTS. John A. White, near Golden, Colo. Application Feb. 12, 1951, Serial No. 210,447. 3 Claims. (Cl. 257—39.)



1. Means for condensing a vaporized refrigerant comprising: a refrigerant condenser including a tube having a vaporized refrigerant receiving end and a condensed refrigerant discharge end, a jacket surrounding the major portion of the tube open from one end to the other, a conduit for conducting a liquid cooling medium into the end of said jacket adjacent the condensed refrigerant end of said tube, a conduit for conducting said cooling medium in a vapor form from the end of said jacket adjacent the vaporized refrigerant receiving end of the tube, first and second cooling medium vapor condensers with the first of which said last conduit is in communication, a conduit in communication with said first and second condensers, said first and second condensers each including an air jacket, a liquid cooling medium receiver with which said first conduit is in communication, a drain pipe at the lower end of each of said first and second condensers in communication with said liquid cooling medium receiver, a jacket surrounding said receiver, and means for forcing air through each of the jackets of said first and second condensers and said liquid cooling medium receiver.

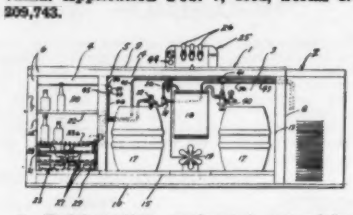
AVAILABLE FOR LICENSING OR SALE

Amana Refrigeration, Inc., offers the following patent for non-exclusive licensing on reasonable terms. Applications for licensing may be addressed to: Director of Engineering, Amana Refrigeration, Inc., Amana, Iowa.

Pat. 2,622,911. Refrigerator Cabinet Latch Strike. Patented Dec. 23, 1952. Refrigerator cabinet latch strike having completely concealed mounting means for adjustment horizontally and inwardly and outwardly so that it will always be in proper alignment with the door to provide a tight seal. The exposed portion of the latch strike, which is especially pleasing in appearance, comprises a tubular shank forming a hook for cooperation with a latch mechanism imbedded in the door. A locking screw with an exterior head extends through the tubular shank and engages the concealed mounting means to lock the latch strike in position after it is properly adjusted. Group 35—84. Reg. No. 53,142.

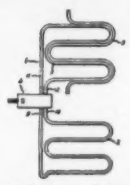
Week of May 4

2,677,241. REFRIGERATION EQUIPMENT FOR BEER COOLING AND ICE-CUBE MAKING. Carl John Schmock, Erie, Pa., assignor to The Uniflow Mfg. Co., Erie, Pa., a corporation of Pennsylvania. Application Feb. 7, 1951, Serial No. 209,743.



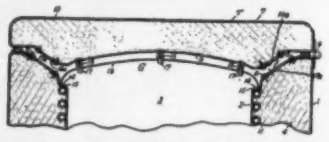
1. Refrigeration equipment comprising, in combination with a compressor unit and a relatively large refrigerating chamber adapted to receive barreled beverages and having an evaporator therein, a relatively small refrigerating chamber divided into upper and lower compartments with shelving for support of bottled beverages in the upper compartment, an evaporator in the lower compartment comprising a coil bent to provide a multiplicity of runs positioned to define shelving for supporting containers for the freezing of water, this last shelving serving also to define at least one boundary of a horizontally extending air circulation passage, partition structure extending upwardly from one end of said passage to define an upright air circulation duct the upper end of which is open to the upper portion of the upper compartment, a lower portion of the upper compartment being in communication with the other end of said horizontal passage, an air circulation fan adjacent one end of said passage for circulating air through said passage in contact with said evaporator coil and thence upwardly through said duct and into the upper portion of the upper compartment to be returned to the said passage, the evaporators in the large and small refrigerating chambers both being connected with said compressor unit, and independently operating temperature controlling systems for the large and small chambers including for the small chamber a temperature responsive device in this chamber located in the upper compartment thereof and connected to regulate the operation of the air circulation fan.

2,677,242. SECONDARY REFRIGERATION CONTROL SYSTEM. Charles S. Grimshaw, Erie, Pa., assignor to General Electric Co., a corporation of New York. Application Jan. 31, 1952, Serial No. 269,253.



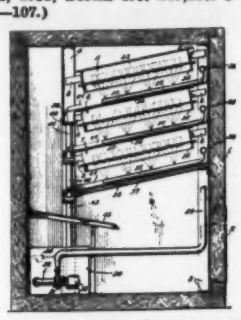
1. In a secondary refrigerating system including an evaporator and a condenser, means for controlling the flow of refrigerant in said system and thereby controlling the temperature of said evaporator comprising a refrigerant reservoir, a tube to said evaporator being arranged to drain liquid refrigerant from said reservoir, a tube from said evaporator extending into said reservoir and effective for returning vaporous refrigerant and liquid thereto, a tube to said condenser being arranged to receive vaporous refrigerant from said reservoir, a tube from said condenser being arranged to conduct condensed refrigerant to said reservoir, said tubes to and from said condenser extending into said reservoir, a receptacle in said reservoir cooperating with said tubes to and from said condenser, said receptacle being adapted to hold a supply of liquid refrigerant, said receptacle being movable between one and another position, said liquid refrigerant in said receptacle being effective when said receptacle is in one position for closng the ends of said tubes to and from said condenser thereby to cause said condenser to become substantially filled with an to retain condensed refrigerant whereby the operation of said condenser is discontinued and the refrigeration process is stopped, said liquid refrigerant being effective when said receptacle is in the other position for closing the end of said tube from said condenser only whereby vaporous refrigerant is admitted into said tube to said condenser and the condensed refrigerant is permitted to flow from said tube from said condenser and into said reservoir for continuing the refrigeration process, a humidity controlled device located in the vicinity of said evaporator, a solenoid associated with the receptacle and controlled by said humidity controlled device whereby low humidity about said evaporator causes said receptacle to be maintained in said one position and high humidity causes said receptacle to be moved to said other position.

2,677,247. REFRIGERATED CABINET WITH HEAT TRANSFER MEANS ON INNER LINER OF THE DOOR. William G. Spiegelhalter, Erie, Pa., assignor to General Electric Co., a corporation of New York. Application Dec. 30, 1952, Serial No. 328,727. 12 Claims. (Cl. 62—99.)



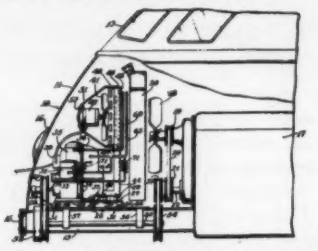
1. In a refrigerated cabinet an outer case, an inner liner spaced from said outer case and defining a food storage compartment having an access opening, a closure member hinged to said outer case and adapted to close said access opening, means secured to said inner liner for refrigerating said storage compartment, said closure member including an inner wall defining one wall of said storage compartment and disposed in spaced relationship to said liner whereby said refrigerating means does not extend entirely to the region adjacent said inner wall of said closure member, an auxiliary member of heat-conducting material mounted on said inner wall of said closure member, said auxiliary member being arranged to engage said refrigerated inner liner when said closure member is in its closed position for cooling the region of said storage compartment beyond said inner liner and adjacent said inner wall of said closure member.

2,677,249. APPARATUS FOR FORMING ICE CUBES. Hugh B. Mason, San Gabriel, Calif., assignor of one-third to Sabra E. Mason, San Gabriel, Calif. Application Sept. 18, 1951, Serial No. 247,156. 5 Claims. (Cl. 62—107.)



1. An apparatus for forming relatively small clear solid ice blocks comprising a freezing unit including a supporting frame, plates at each side thereof, an insulating material in the chamber between the plates, tubes completely embedded in said insulating material placed side by side and connected at alternate ends, means for circulating a heat transferring medium through said tubes, a series of molds associated with each tube, each mold having one end closed and the other end open, each tube having closely spaced openings shaped to conform to the molds, the side plate adjacent said tube openings having similar openings, said molds being inserted in said openings and welded to said tube with the open ends projecting from the side plate, means for supporting said freezing unit with the open ends of the molds facing downwardly, and spray pipes disposed beneath and spaced from said molds having nozzles arranged so as to direct water into each mold.

2,677,251. FRONT MOUNTED TRUCK REFRIGERATION UNIT. Adna R. Clark, Evansville, Ind., assignor to International Harvester Co., a corporation of New Jersey. Application Oct. 15, 1951, Serial No. 251,341. 9 Claims. (Cl. 62—117.1.)



1. In a refrigerated automotive vehicle having transversely spaced and longitudinally extending chassis frame members, and a water cooling radiator disposed forwardly of a driving engine in the forward portion of a vehicle, the combination, comprising: a base member disposed forwardly of the vehicle radiator and supported by the chassis frame members; refrigeration apparatus, including a first refrigerant compressor, a second and separate refrigerant compressor, a receiver tank, a condenser and fluid conducting conduits connected therebetween, supported on said base member; means, including a variable speed-ratio mechanism, for operatively connecting said first compressor with the vehicle engine for driving engagement therewith during the time of engine operation; and having said second compressor an hermetic-type unit with a self-contained electric driving motor adapted for operation, upon connection with a source of electric power supply, as a stand-by when said first compressor is inoperative.

(To Be Continued)

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DESIGN ENGINEER—engineering degree or equivalent, with experience in the control, valve, and electrical field for manufacturer of automatic refrigerant control devices located in St. Louis, Missouri. BOX A5036, Air Conditioning & Refrigeration News.

EXPERIENCED AIR conditioning engineer for inside sales and engineering with Los Angeles wholesale distributor. Excellent opportunity for right man. Give in detail, salary expected, complete past experience and enclose recent photo. BOX A5037, Air Conditioning & Refrigeration News.

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9-13-54

U.S. Court of Appeals Rules That McCray Did Not Infringe Skoog Brothers' Patent

KENDALLVILLE, Ind.—The U. S. Court of Appeals for the Seventh Circuit has upheld a lower court decision that McCray Refrigerator Co. did not infringe on a patent held by Robert E. Skoog and John B. Skoog of Minneapolis.

The infringement suit brought by Skoog and Skoog involved the McCray combination service and self-service type "GQ" and "GV" refrigerated display cases. The Skoog and Skoog patent on a similar combination was held invalid.

The court also ruled that McCray did not violate a confidential disclosure of a trade secret as charged by Skoog and Skoog.

EXCERPTS FROM DECISION

Excerpts from the court decision, which was issued on March 23, are published here as a matter of interest to the industry.

"Plaintiffs are brothers who operated a small retail grocery and meat market in Minneapolis. Their groceries were sold on a self-service basis but the meat department was operated on a service basis.

"Desiring to establish a frozen food department and their floor space being limited, plaintiffs conceived the idea of placing on the front side of the refrigerated meat display cabinet which they had in their store, a narrow-open-topped freezer cabinet from which frozen foods could be sold on a self-service basis.

"This compartment had an open rear side but had a front wall and two side walls and was fastened by side plates, nuts, and bolts to the lower front of the meat display cabinet, the top of the well being just below the level of the slanting glass front.

PLAINTIFFS DESCRIBE CABINET

"Plaintiffs described their cabinet as consisting of 'a display compartment with an upper display portion having a glass front wall, an open-topped, open rear-side self-service compartment mounted in front of the display compartment and below the glass front of the display portion thereof, and a storage space in the display compartment below the display shelf in the upper display portion and behind the self-service compartment and having a common wall with the self-service compartment to reduce the dimensions of the two compartments, together with means for refrigerating the several compartments.'

"It is without dispute that a floor area of some 6 in. wide and the length of the cabinet was saved by plaintiffs' arrangement over that which would have been required had the meat display cabinet and the freezer compartment been merely placed in juxtaposition.

MFRS. INVITED TO INSPECT CABINET OR GET PICTURES

"Plaintiffs' cabinet was installed for use of their customers shortly before Thanksgiving, 1947. An application for a patent thereon was filed Dec. 13, 1947. In the hopes of interesting a manufacturer of commercial refrigerator cabinets in purchasing the invention, plaintiffs sent out letters dated Jan. 2, 1948, to refrigeration manufacturers, including defendant, which did not state the nature of plaintiffs' invention but offered to make a disclosure, either by mailing photographs and a description or inviting one of their salesmen or engineers to call at plaintiffs' store and inspect the device.

"On Jan. 9, 1948, defendant replied that it was always interested in something new and would turn plaintiffs' disclosure over to its engineering department for examination. . . .

DEFENDANT EXPRESSES DISINTEREST

"On Jan. 26, 1948, plaintiffs sent to defendant two photographs of their combination cabinet. . . . On Feb. 11, 1948, defendant informed plaintiffs that it was not interested in their combination cabinet.

"Within a year thereafter, defendant commenced the manufacture and sale of a combination cabinet which plaintiffs claim infringes their patent and resulted from the appropriation of confidential information furnished to defendant by the plaintiffs herein.

COURT CITES DIFFERENCES

"We think the district court was correct in finding non-infringement. Claims 1 and 2 of the patent in suit each provide for an open-topped compartment positioned on the front of the cabinet and exterior to the compartment.

"In defendant's construction the open-topped compartment extends back into the cabinet through a front opening therein. It is not positioned on the front of the cabinet in the sense used in plaintiffs' patent claims.

"Furthermore, Claim 1 calls for one wall in common with the first named compartment. Defendant's cabinet does not have a front wall of the display unit in common with the rear wall of the open-topped unit.

"The test of infringement is whether the accused device does the same work in substantially the same way and accomplishes the same result. . . . In the patent in suit, the completely separated compartments are individually cooled by cooling coils embedded in the walls thereof.

"In defendant's cabinet the compartments are cooled by forced circulation of air past an exposed cooling coil, then divided and directed through the two communicating compartments after which it is returned to the coil for recooling.

COURT AGREES WITH DISTRICT COURT

"We agree with the conclusion of the district court: 'The refrigerating means employed by defendant in its cabinet in suit is not the "equivalent," in the sense of the patent laws, of the refrigerating means employed by plaintiffs in their patent in suit. . . .'

"Each unit of the patent in suit can be used separately and independently of the other. No new function results from a combination of the elements and the new result is merely that which arises from the operation of each. . . . To be patentable the combination of old elements must contribute something. 'Only when the whole in some way exceeds the sum of its parts is the accumulation of old devices patentable. . . .'

"Plaintiffs urge that defendant appropriated their trade secret obtained from them through a confidential relationship. . . . We think it well established that there can be no confidential disclosure where there has been a prior disclosure to the public without reservation. Nims, Unfair Competition, Vol 1, p. 402, says: 'A secret is . . . anything hidden from general knowledge or observation.'

"In **Affiliated Enterprises, Inc. v. Gruber,** 1 Cir, 86 F. 2d 958, the court held that 'any property right based upon secrecy was lost as early, at least, as the first public exhibition. . . .'

DEFENDANT'S CABINET INDEPENDENTLY DESIGNED

"Another reason that plaintiffs' claim of appropriation of a trade secret must fail is that defendant's cabinet was independently designed by its employe Howard without knowledge of plaintiffs' combination cabinet. The district court so found, and there is substantial evidence in the record to sustain such finding."

Apex Appoints Curran Detroit Div. Manager

LAKE ORION, Mich. — Arthur (Art) D. Curran has been appointed division manager of the Detroit division for Apex Rotarex Corp. The division includes Detroit, Lansing, Grand Rapids, Toledo, Ft. Wayne, and South Bend.

6 To Distribute Schaefer Frozen Food Cabinets

MINNEAPOLIS—Six more new distributors for frozen food cabinets have been appointed by Schaefer, Inc., according to H. N. Nafstad, sales manager of the frozen food cabinet division.

These are: Merchants Equipment Co., Birmingham, Ala.; W. A. Ramsay Co., Honolulu, Hawaii; Johnson Refrigeration Co., La Crosse, Wis.; Northwest Store Fixture Co., Minot, N. D.; Cable-Wiedemer, Inc., Rochester, N. Y.; and Domino Refrigeration & Appliance, Ltd., Vancouver, B. C., Canada.

Schaefer, Inc. manufactures ice cream cabinets, frozen food cabinets, and home freezers.

Deepfreeze Appoints Joyce Central Indiana Distributor

N. CHICAGO, Ill.—The appointment of Joyce Appliances, Inc., Indianapolis, as distributor for Deepfreeze home appliances has been announced by L. R. Walker, manager of field sales for Deepfreeze Appliance Div., Motor Products Corp.

Joyce Appliances will cover 41 counties of central Indiana, including the cities of Indianapolis, Terre Haute, Muncie, and Lafayette, and five Illinois counties near Terre Haute.

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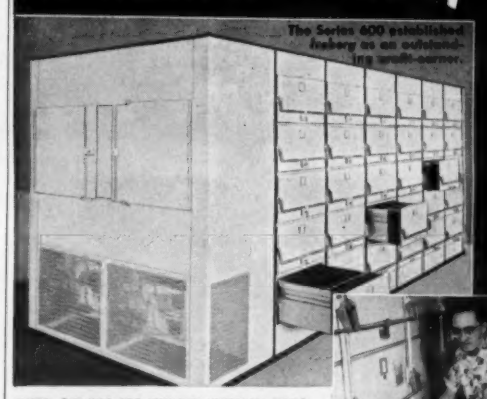

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Carrier Profits--

(Concluded from Page 1, Col. 2)

whole, Cloud Wampler, president of Carrier, said: "Our volume will not be as large as the record total of last year. As anticipated, the business of the corporation with the government is down considerably. And the increase in civilian orders, while substantial, has not been sufficient to offset this."

Wampler also stated: "Although our business has been good this year, it is below expectations in completed sales of unitary equipment, especially room air conditioners.

"This is a condition which apparently prevails throughout the industry and was caused by abnormally cool weather this spring and summer and the confused price situation resulting from the large number of concerns that recently entered the room air conditioner business."

Wampler expressed the opinion that the industry is going through a period of adjustment and that for some little time profit margins are apt to be unsatisfactory.

On the other hand, vigorous competition and better values will certainly cause more and more people to purchase air conditioning equipment and this augurs well for the future of the industry.

The substantial increase in the number of common shares since July of 1953 is the result of preferred stock conversion and the sale of 278,422 shares of common stock last September. The proceeds from this financing continue to be invested in U. S. Government securities and the corporation does not intend to embark upon a construction program until the spring of 1955.

A-P Purchases--

(Concluded from Page 1, Col. 3)

its plant at 2375 S. Burrell St. was founded in 1901 to manufacture brass valve products. It was operated for many years by V. Fina, president, until 1954 when his son, Phillip Fina, took over as president. Under the new arrangement, Fina will continue as a vice president of Milwaukee Valve Co.

At the present time, a complete line of brass and aluminum valves for gasoline, oil, chemical, heating, and the aviation industries are made. Extensive government work is also being done.

A total of 75,000 sq. ft. of floor space is contained in the company's factory and office.

It is the intention of A-P management to operate the Milwaukee Valve as in the past, continuing the manufacture of the same products in the present plant.

Columbia U. Meeting--

(Concluded from Page 1, Col. 2)

Mechanical Engineers, Process Industries Div.; the 50th of the American Society of Refrigerating Engineers; the 60th of the American Society of Heating & Ventilating Engineers; the 90th of Columbia's engineering school; and the 200th of the university.

Sessions will be held at the Pupin Physics Laboratories (120th St. between Broadway and Amsterdam Ave.) on the campus. There is no charge for registration. The social hour and dinner will be held at the Men's Faculty club, 400 W. 117th St. Charge for the dinner is $6.

An Industrial Ventilation Conference Sept. 15 to 17 will follow the refrigeration and air conditioning sessions at the same place.

Complete tentative program for the latter event is as follows:

MONDAY, SEPT. 13

9:30 a.m.—Greetings by Prof. Carl F. Kayan.

"Panorama of Progress In Air Conditioning," chairman: Walter Fleisher, past president, ASHVE.

"Air Conditioning Research In ASHVE, Its Progress and Development," L. N. Hunter, president, ASHVE.

"Past Research," Clark M. Humphreys, senior engineer, ASHVE Research Laboratory.

"Present Research," Richard S. Dill, chairman, ASHVE Committee on Research; National Bureau of Standards.

"Future Research," Elmer R. Kaiser, director of research, ASHVE Research Laboratory.

"Climatological Factors In Air Conditioning," John Everetts, Jr., C. S. Leopold, engineers.

2 p.m.—Chairman: Charles S. Leopold, past president, ASRE.

"Modern Design Practice," Walter A. Grant, Carrier Corp.

"Physiological and Psychological Factors In System Design," Alfred Jaros, Jr., Jaros, Baum & Bolles.

"Factors In the Conditioning of Modern Office Buildings," P. B. Gordon, Wolff & Munier.

"Evolution of Packaged Air Conditioning Units," Justin Neuhoff, General Electric Co.

"Development of the Heat Pump," Eugene R. Ambrose, American Gas & Electric Service Corp.

"Threshold Research In Odor Perception," Dr. Bernice M. Wenzel, Barnard College, Columbia university.

TUESDAY, SEPT. 14

9:30 a.m.—"Panorama of Progress In Refrigeration," Chairman: Arthur J. Hess, president, ASRE.

"Developments In Refrigeration Insulation," John F. Stone, Johns-Manville Corp.

"Commercial and Small Industrial Refrigeration Equipment," D. C. McCoy, Frigidaire Div., General Motors Corp.

"Large Capacity Refrigeration Systems," Matthew Lawler, Worthington Corp.

"Refrigerated Transport," John N. Kelly, Fruit Dispatch Co.

"Marine Refrigeration," James Scott, York Corp.

2 p.m.—Chairman: H. C. Diehl, director, TRRF.

"Evolution of Household Refrigerators and Freezers," Milton Kalischer, Westinghouse Corp.

"Refrigeration of Fruits and Vegetables," Wilbur T. Pentzer, U. S. Dept. of Agriculture.

"Design Transitions of the Cold Storage Warehouse," Paul B. Christensen, North East Cold Storage Co.

"Time-Temperature Tolerance of Frozen Foods," Eugene F. Jansen, U. S. Dept. of Agriculture.

"Heat Transfer In Production Food Freezing," William J. Finnegan, W. J. Finnegan Associates.

"Production of Low Temperature: Gay-Lussac and Joule-Thomson," Dr. James H. Potter, Stevens Institute of Technology.

5:30 p.m.—Social hour, Men's Faculty club.

7 p.m.—Conference jubilee dinner, Men's Faculty club.

"The Impact of Refrigeration on Our Modern Era," Dr. Samuel C. Prescott, dean emeritus of science, Massachusetts Institute of Technology.

"Whither Mankind—and Air Conditioning," George S. Jones, Jr., managing director, ARI.

Marling Heads Controls Sales for Jackes-Evans

ST. LOUIS—The appointment of John H. Marling as sales manager of the Controls Div. of Jackes-Evans Mfg. Co., maker of J-E solenoid valves for air conditioning and refrigeration applications, has been announced by S. F. Jackes, president.

John Marling

Marling has represented the firm for a number of years in the Dayton and Detroit areas. Prior to coming to Jackes-Evans, he was for several years associated with the Alco Valve Co. of St. Louis and Chrysler Airtemp at Dayton. Marling is a graduate of Purdue university and holds a B.S.M.E. degree.

Natkin Gets Contract For County Hospital

ST. LOUIS—On its low bid of $111,955, Natkin & Co. was awarded a contract by the County Council for air conditioning operating and delivery rooms at St. Louis County hospital. The contract covers necessary alterations to be made prior to installation.

Reuben Trane Is Dead; Founded Firm in 1913

LA CROSSE, Wis.—Reuben N. Trane, former president and chairman of the board and one of the founders of the Trane Co. here, died here Sept. 5 following a long illness.

With his father he incorporated the Trane Co. in 1913, and the company is now one of the nation's major producers of air conditioning and heating equipment. He was president of the company from 1916 to 1951, and chairman of the board until his retirement in December, 1953.

A graduate from the University of Wisconsin in mechanical engineering, Trane worked as a sales engineer until he formed his company, which built its first plant in La Crosse in 1919.

Seal Water-Using Units--

(Concluded from Page 1, Col. 2)

up the money," Harold V. Florence, superintendent of the Water Department, reported.

Following the initial inspection tour, department offcials were told to check the sealed units to make certain none were being operated in violation of the ban. Mayor Albert J. Faber ordered that if any merchant broke the seal and continued to use potable water for air conditioning, his water would be cut off at the curb.

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